SONY

Mini Hi-Fi Component System

Operating Instructions

COMPACT disc DIGITAL AUDIO

MHC-C70

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WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

The following caution label is located inside the unit.

CAUTION	: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	: USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	: AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSÄTEILYLLE.
VARNING	: LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD.
ADVARSEL	: USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES VÆRDA EKSPONERING FOR STRÅLEN.

NOTICE FOR CUSTOMERS IN THE UNITED KINGDOM
A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a 5AMP fuse approved by ASTA or BSI to BS 1362, (i.e. marked with ⊕ or ⓢ mark) must be used.

If the plug supplied with BS equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

IMPORTANT
If the plug supplied is not suitable for the socket outlets in your home, it should be cut off and an appropriate plug fitted in accordance with the following instructions.

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red. Do not connect either wire to the earth terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.

WARNING
To prevent shock hazard, do not insert the plug cut off from the mains lead into a socket outlet. This plug cannot be used and should be destroyed.

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Overview

Tuner section

For Germany and Italy:

- You can store up to 30 stations; 20 stations for FM and 10 stations for AM.

For other countries:

- You can store up to 40 stations; 20 stations for FM, 10 stations for MW, and 10 stations for LW.

Amplifier section

- The Sound Field Coordinator system allows you to enjoy various sound effects with simple operation.
  — You can easily adjust the music to your taste by selecting from 6 factory-preset settings of graphic equalizer and surround effect.
- DBS (Dynamic Bass System) reinforces the bass sound.
- The surround system adds surround effect to stereo sound.
- You can select the desired program source directly just by pressing the operation buttons on the program source equipment: BAND or –/+ to select the tuner, ▷ to select the CD player, and ◁ or ▷ to select the cassette deck (Automatic Source Selection).
- You can play the desired program source directly just by pressing the function buttons (TAPE, CD, TUNER) while the system is turned off (One Touch Play).

CD player section

- The CD player allows you to play up to 5 discs in a row.
- You can enjoy listening in various playing modes.
- The Tape Select Edit function automatically chooses the most suitable tape length for recording a CD.
- The Custom File function allows you to make your disc custom-made by:
  — assigning a name to the disc (Disc Memo).
  — memorizing the sound adjustment on the disc (Sound Field File).

Cassette deck section

- Auto-reverse decks enable repeated playback of both sides of the cassette.
- The CD synchro function enables easy recording of a CD.
- Double decks enable tape dubbing and continuous playback.
- You can use synchronized dubbing at high speed.

Remote commander

- A remote commander is supplied with this unit.

How to Use This Manual

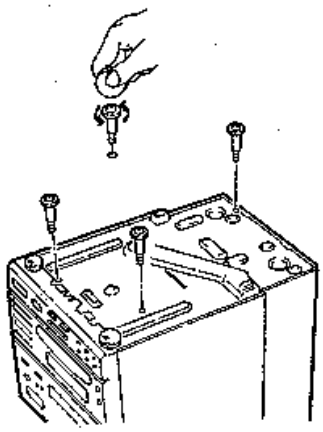
How this manual is composed

Please read the instructions in this manual referring to the illustrations.

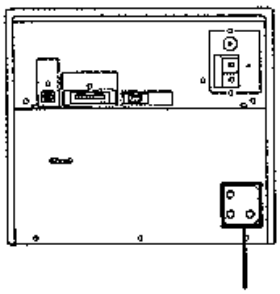
- The letters in the illustrations correspond to the letters in the text.
  ex. Speaker Cord Connection **A**
- The step numbers in the illustrations correspond to the step numbers in the text.

Precautions

A



B



Transporting lock screws holder

On operating voltage

Before operating the stereo system, check that the operating voltage of your system is identical with the voltage of your local power supply.

U.K. model	240 V AC, 50 Hz
European model	220 — 230 V AC, 50/60 Hz

On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the system from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Be sure to turn off the power when you unplug the AC power cord.
- Should any solid object or liquid fall into the component, unplug the system and have it checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.
- Do not move the unit while a disc is in any of the disc trays, otherwise the discs may fall out of the trays and you will be unable to remove them.
- Do not insert more than one disc in one tray.
- Do not install the unit in a place where there is excessive dust or smoke.
- This unit uses several micro-computer chips to control a series of operations. Sometimes, an operation may not work properly due to the condition of the power being supplied. In this case, unplug the AC power cord, then re-connect it and retry the operation.

On lock screws A

The lock screws on the bottom exterior of the CD player protect the unit against shock during transportation. Before operating the CD player, remove the three lock screws by following the instructions on the label, and store them in the transporting lock screws holder.

When transporting the unit, replace the lock screws in their original holes and lock them.

Transporting lock screws holder B

There are three screw holes located on the back of the CD player that can be used to store the lock screws after they have been removed in order to keep the screws from being lost.

Simply screw the lock screws into these holders for safekeeping.

To re-install the screws

1. Take out the discs from all disc trays.
2. Press OPEN/CLOSE ⏏ for DISC 1.
   The disc tray opens.
3. Press SYSTEM POWER to turn off the power.
   The disc tray closes.
4. Disconnect the AC power cord.
5. Re-install the lock screws.

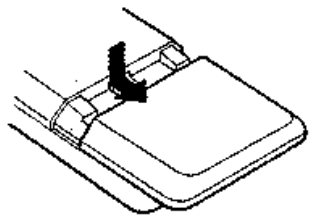
Note on the indicator for the II PAUSE button

The indicator for the II PAUSE button flashes each time you connect the AC power cord to a wall outlet or turn on the power with the SYSTEM POWER button; this is normal.

If you have any question or problem concerning your stereo system, please consult your nearest Sony dealer.

Preparations

A

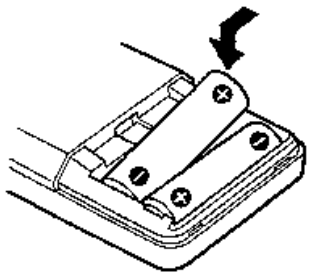


Installation

Place the stereo system in a location with adequate ventilation to prevent internal heat build-up in the system.

On moisture condensation in the CD player section

If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the unit. Should this occur, the CD player will not operate. In this case, remove the disc and leave the system turned on for about an hour until the moisture evaporates.



Battery Installation A

Install two R6 (size AA) batteries in the supplied remote commander for remote control operation.

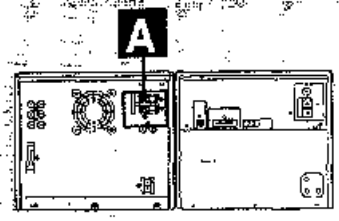
Battery life

About half a year of normal operation can be expected when using Sony SUM-3 (NS) batteries. When the batteries are exhausted, the commander cannot operate the stereo system. When this happens, replace both batteries with new ones.

To avoid battery leakage

If the commander is not to be used for a long time, remove the batteries to avoid damage caused by battery leakage and corrosion.

Connections



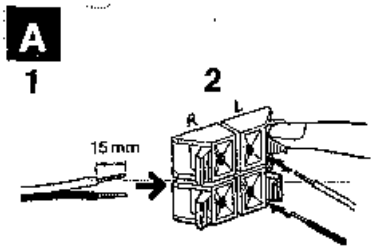
Notes on connection

- Connect the AC power cord last.
- Cord plugs and jacks are colour coded. Red plugs and jacks are for the right channel (R) and white ones for the left channel (L).

Speaker Cord Connection A

1 Strip 15 mm of the speaker cord coating from the end of the cord. Twist each end of the wire.

2 Connect the right speaker to R, with the red cord to + and the black cord to –. Connect the left speaker to L, with the red cord to + and the black cord to –.



Flat Cord Connection B

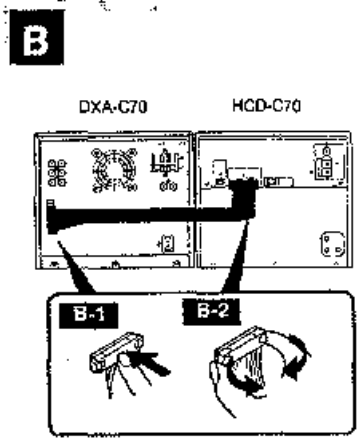
Connect the system with the supplied flat cord.

B-1

To connect, depress the middle of the connector until it clicks into the male connector.

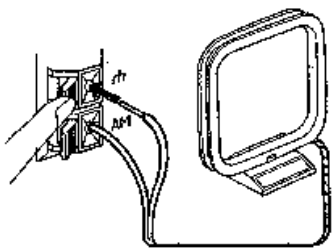
B-2

To disconnect, pull the connector out. Never pull the cord itself.



Connections

A



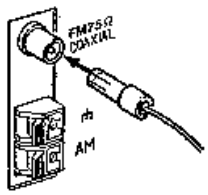
AM or MW/LW Antenna Connection A

Connect the supplied loop antenna to the AM and ⏚ terminals.

FM Wire Antenna Connection B

Connect the supplied FM wire antenna to the FM 75Ω terminal and extend the wire horizontally.

B



For Better FM Reception C

Connect an outdoor FM antenna to the FM 75Ω terminal, using 75-ohm coaxial cable.

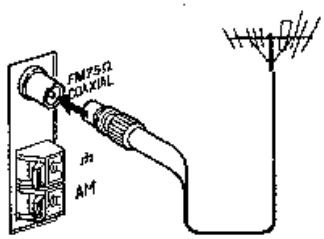
For Better AM or MW/LW Reception D

Use the 6- to 15-meter (20- to 50-foot) insulated wire for connecting the AM terminal. Connect the ⏚ terminal to a good ground.

Important

When you use an external antenna, be sure to ground it against lightning. Never connect the ground wire to a gas pipe. Doing so is extremely dangerous.

C



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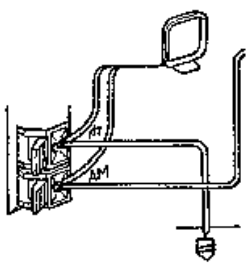
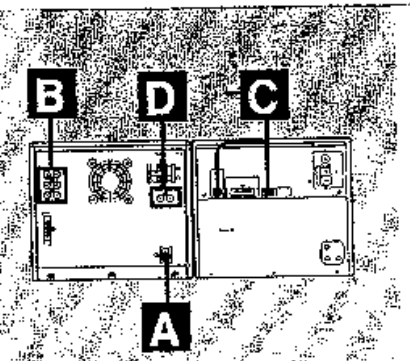
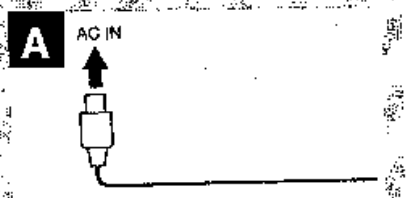
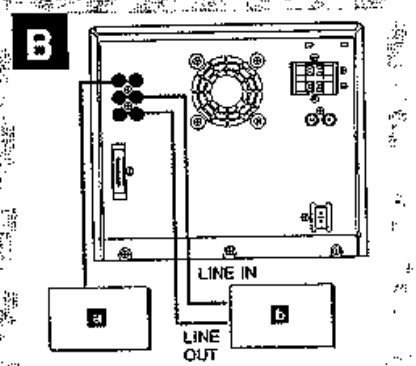
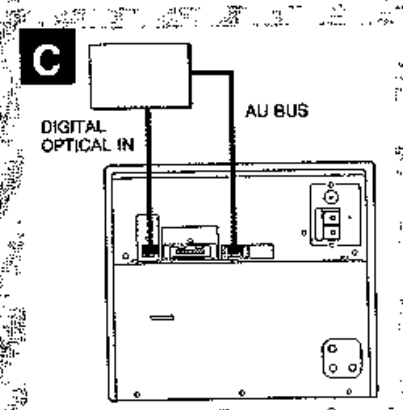
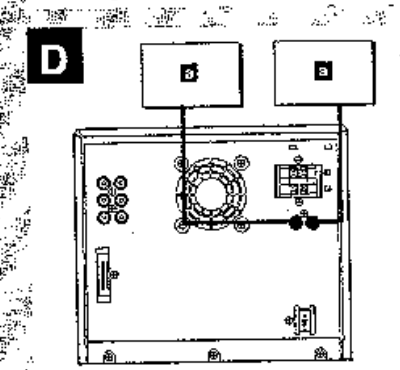












Connections

Power Connection A

Connect the supplied AC power cord to AC IN and the other end to a wall outlet.

Adding Other Components to Your System

Turntable system B

You can connect a turntable system a to the PHONO IN jacks. To listen to the turntable system, press the PHONO button on the front panel.

MD Recorder or DAT deck B

You can connect the Sony MDS-101 b MD (Mini Disc) recorder (not supplied) or a DAT deck b to the MD/DAT jacks. To listen to the connected equipment, press the MD/DAT button on the front panel.

For recording from a CD C

Connect an optical cord to the DIGITAL OPTICAL OUT jack on the rear panel.

AU BUS C

You can connect other Sony equipment (MD recorder, DAT deck, etc.) with AU BUS to the AU BUS jack.

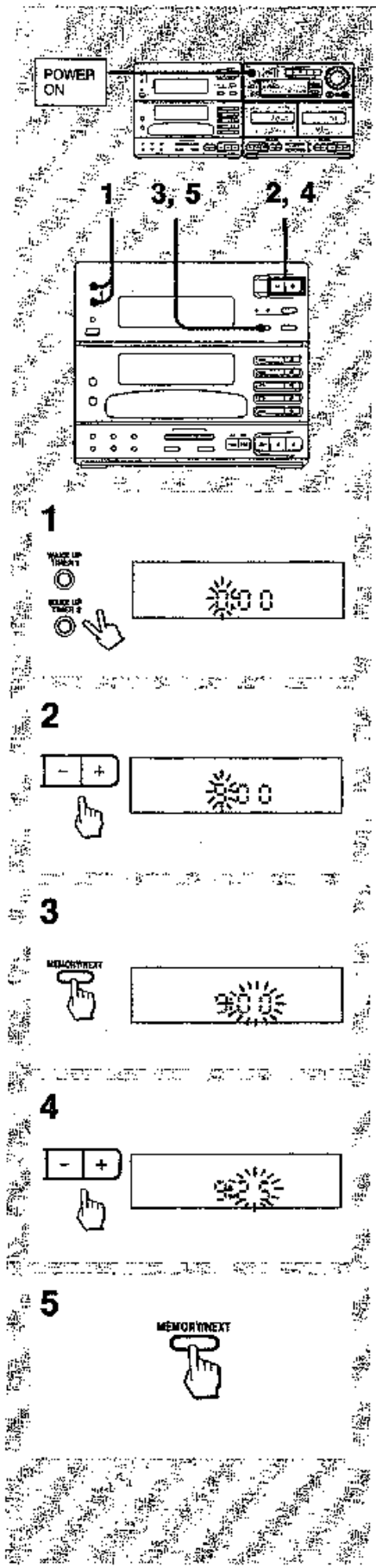
Note

You can use the Automatic Source Selection, Synchronized Recording and Timer Recording by connecting the AU BUS. However, these functions may not be provided on some models.

Surround Speakers D

You can connect a surround speaker system a (Sony SS-P55AV or SS-V7; not supplied) to the SURROUND SPEAKER jacks.

Clock Setting



Setting the Clock

Example: Set to 9:25 in the morning.

1 **Press WAKE UP TIMER 1 and 2 at the same time.**

2 **Set the hour with the – or + button.**

3 **Press MEMORY/NEXT.**

4 **Set the minute with the – or + button.**

5 **Press MEMORY/NEXT.**
The clock starts operating.

Information on the time

This model shows the time in a 24-hour cycle.

When a power interruption occurs

The clock and timer settings are all erased, and "0:00" will flash on the display.

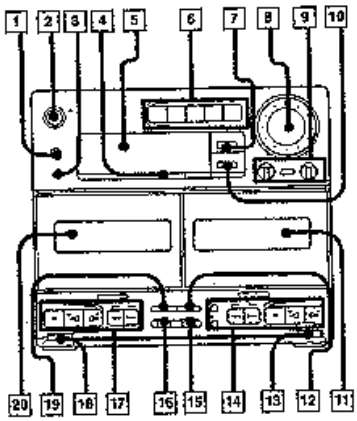
To change the frequency display to the time display

Press CLOCK DISPLAY on the remote commander. Press it again to change to the frequency display.

Parts Identification

A

Refer to the pages indicated in ( ) for use of the buttons.



Amplifier/Cassette Deck Section A

Amplifier

1 HEADPHONES jack (stereo minijack) (14)
2 SYSTEM POWER switch and ON/STANDBY indicator (13)
The indicator remains lit as long as the AC power cord is connected to a wall outlet.
3 DISPLAY button (43)
4 EFFECT button (43 — 45)
5 Display window
6 Function buttons and indicators
- TAPE
- MD/DAT
- CD
- TUNER
- PHONO

7 PRESET button (43 — 45)
8 VOLUME control (14)
9 Dynamic Bass System (DBS) controls and indicator
- LEVEL control (14)
- FREQ (frequency) control (14)

10 P. FILE (Personal File) button (46)

Cassette Deck

11 Cassette holder (deck B)
12 CD SYNCHRO button (39, 42)
13 ⏏ Eject button (deck B)
14 Tape operation buttons (for deck B)
- ■: Stop button
- ▷: Forward play button and indicator
- ◁: Reverse play button and indicator
- AMS ◀◀ ▶▶: Fast winding buttons
- ❙❙ PAUSE: Pause button and indicator
- ● REC: Recording button and indicator

15 DOLBY NR (Dolby Noise Reduction) selector (32)
16 DIRECTION mode selector (32)
17 Tape operation buttons (for deck A)
- ■: Stop button
- ▷: Forward play button and indicator
- ◁: Reverse play button and indicator
- AMS ◀◀ ▶▶: Fast winding buttons

18 ⏏ Eject button (deck A)
19 HIGH SPEED DUBBING button (37)
20 Cassette holder (deck A)

Parts Identification

Tuner/CD Player Section

Tuner B

1. Remote control sensor
2. WAKE UP TIMER 1, 2 /CLOCK SET buttons (9, 47)
3. TIMER REC button (49)
4. Display window
5. MEMORY/NEXT button (9, 30, 47, 49)
6. MODE button and TUNING/PRESET indicators (28, 29, 31)
7. BAND selector (28)
8. PRESET/TIMER –/+ buttons (9, 28 — 31)
9. STEREO/MONO (stereo/monaural) button (29)

Display

10. Timer indications
11. Tuner indications
12. MEMORY indication (30)
13. Preset station number display
14. Frequency and clock display
15. Program source/Recording equipment display for timer operation

CD Player C

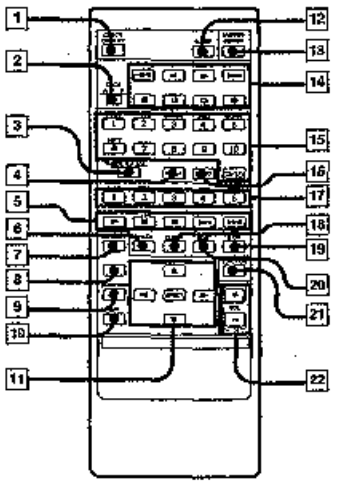
1. MIX MIC (microphone) input jack (minijack) (52)
2. MIC (microphone) LEVEL control (52)
3. Display window
4. Disc tray door
5. DISC 1 — 5 selectors and disc tray indicators (18, 19)
6. OPEN/CLOSE ⏏ buttons (16)
7. CD operation buttons
   - ■: Stop button
   - ❚❚: Pause button
   - ▷: Play button
   - ⏮◀◀ ▶▶⏭: Manual search (when kept depressed)/Automatic Music Sensor (when pressed) buttons
8. REPEAT button (20)
9. PLAY MODE buttons
   - PROGRAM button (22)
   - SHUFFLE button (21)
   - CONTINUE button (16)
10. TIME/MEMO button (18, 25)
11. S.F.FILE (Sound Field File) button (27)
12. CURSOR button (26)
13. CHARACTER ◁/▷ buttons (26)
14. MEMO INPUT button (26)
15. ERASE button (26, 27)

Display

16. CD playing mode indications
17. CD playing time display
    Disc Memo display
18. S.F.FILE on/off indication
19. DISC MEMO on/off indication
20. CD editing mode indications
21. CD selection number display
22. Indicators for all track numbers on a CD

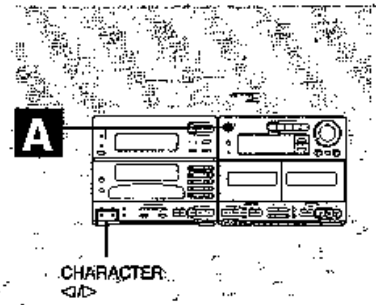
Parts Identification

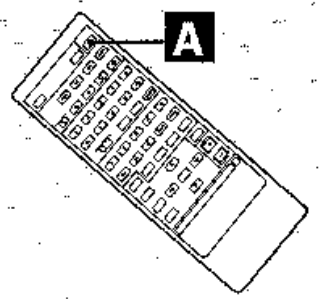
D



Remote Commander D

1. CLOCK DISPLAY button (9)
2. DECK A/B selector
3. TUNER/EQ/CD numeric buttons function selector
4. P. FILE button (48)
5. CD player operation buttons
6. CHECK button (24)
7. MEMORY button (46)
8. EQ button (44)
9. SURROUND button (45)
10. OFF button (44, 45)
11. CURSOR CONTROL buttons and EFFECT button (44 — 46)
12. SLEEP button (51)
13. SYSTEM POWER button
14. Cassette deck operation buttons
15. Tuner/equalizer/CD numeric buttons
16. BAND button (31)
17. DISC 1 — 5 selectors (16 — 19)
18. CLEAR button (24)
19. DISC SKIP button (19)
20. EDIT button (41)
21. FUNCTION button
22. VOL +/– buttons (14)





Turning On the Power

Press SYSTEM POWER. A

About the demonstration display
The CD player has a demonstration display mode. There are two ways to start the demonstration display:
— by starting the demonstration automatically ("Automatic Demonstration Mode").
— by starting the demonstration manually.

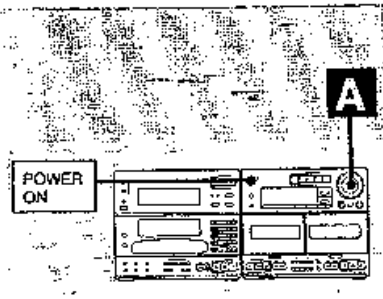
When you turn on the power for the first time, the unit enters the "Automatic Demonstration Mode" automatically.

Note
During the demonstration, all the disc tray indicators light up.

To start the demonstration automatically
The unit automatically enters the Automatic Demonstration Mode when all the disc trays are empty. During this mode, the demonstration starts automatically if you do not press any key within the first minute.
- To stop the demonstration, press any key. The demonstration stops, but if you leave the unit untouched for more than one minute, the demonstration starts again.
- To cancel the Automatic Demonstration Mode, press CHARACTER ◁ and ▷ at the same time during the demonstration. The demonstration does not start even if you leave the unit untouched for more than one minute. The unit enters the Automatic Demonstration Mode again when:
  — you turn off the power once and turn on the power again, or
  — you press CHARACTER ◁ and ▷ at the same time again.

Note
The Automatic Demonstration Mode does not function while checking the Disc Memos using the TIME/MEMO button (page 26).

To start the demonstration manually
Press CHARACTER ◁ and ▷ at the same time while the CD player is in the stop mode.
- To stop the demonstration, press any key.

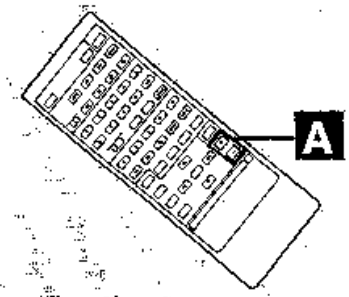


Basic Sound Adjustment

Adjusting the Volume A

Turn VOLUME clockwise to increase the sound level, or counterclockwise to decrease it.
(Or press VOL + or – on the remote commander).

For personal listening B
Connect headphones to HEADPHONES.
No sound comes from the speakers.



Strengthening the Bass

Use the Dynamic Bass System to strengthen the bass.

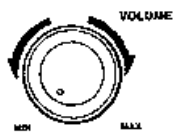
1 Turn LEVEL clockwise so that the DBS indicator lights.
Turn LEVEL clockwise to strengthen the effect, and counterclockwise to weaken the effect.

2 Turn FREQ.
You can strengthen frequencies in the range of 60 Hz to 100 Hz.

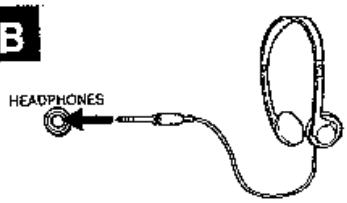
If you do not want the bass strengthened
Turn LEVEL counterclockwise completely so that the indicator is off.
Turn LEVEL clockwise once more to strengthen the bass again.

If you use the Dynamic Bass System with the graphic equalizer
If the bass is too strong, the music will sound distorted. Adjust the bass slowly while listening to music so that you can monitor the effect that the adjustment has.

A

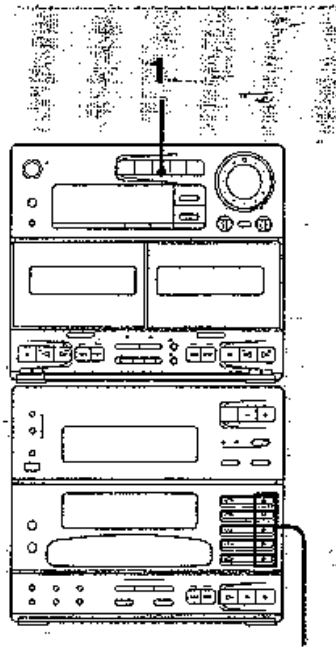


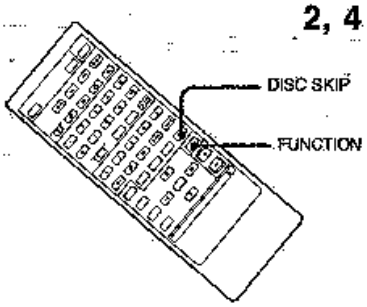
B

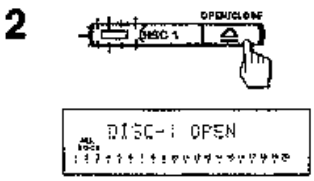


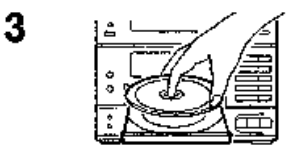
1

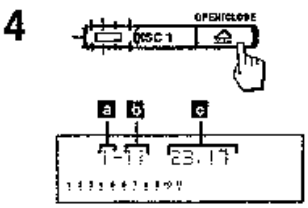
2











CD Playing

Inserting the Discs

1 Press CD on the amplifier section or FUNCTION on the remote commander so that the indicator on the button lights up.
"CD" appears on the display.

2 Press OPEN/CLOSE ≙ of the desired disc tray.
The indicator for the tray (DISC 1 — 5) lights up.

3 Place a disc with the printed side up.

4 Press OPEN/CLOSE ≙ again.
Disc Memo (see page 26) or the disc number appears on the display and then the display shows the following for 4 seconds:
- **a** the disc number
- **b** total number of selections on the disc
- **c** total playing time of the disc

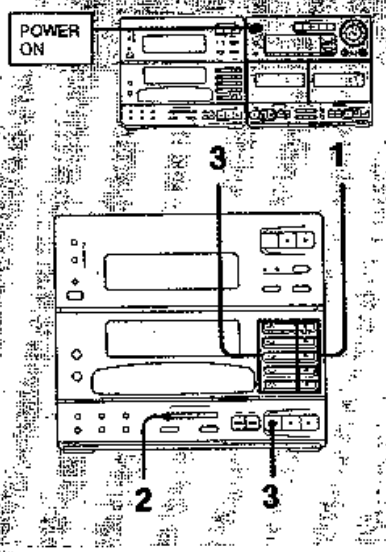
To take out the disc
Press OPEN/CLOSE ≙ of the desired disc tray.

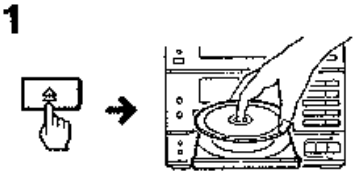
To insert discs sequentially
Press DISC SKIP on the remote commander after step 2. The next tray opens each time you press DISC SKIP so that you can insert other discs.

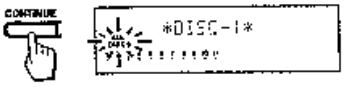
About the disc tray indicators

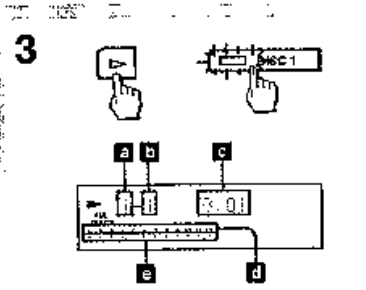
An indicator is provided for each disc tray (DISC 1 — 5).
- The green indicator shows that the tray is selected (either during play or standby, or when the tray is open) no matter if it contains a disc or not.
- The orange indicator shows that there is a disc in the tray but the tray is not selected.
- When there is no disc in the tray and the tray is not selected, the indicator turns off.

To insert an 8 cm CD
Place it on the inner circle of the tray. If the disc is provided with an adaptor, first remove it. Do not put a normal CD (12 cm) on top of an 8 cm CD.









CD Playing

Playing the Entire Disc — Continuous Play

1 Insert the disc(s) in the disc tray(s). (See page 15.)

2 Press CONTINUE to choose whether to play one disc (1 DISC) or all discs (ALL DISCS).

3 Press ▷ or DISC 1 — 5.
Play starts from the beginning of the selected disc (whose disc tray indicator is green).

The display shows:
- a the disc number
- b the current track number
- c elapsed playing time of the track
- d a Music Calendar — track numbers to be played (track numbers 1 to 20 only)
- e track indicators — all the track numbers on the disc (track numbers 1 to 20 only)

Caution on adjusting volume
Do not turn up the volume while listening to a portion with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level portion is played.

To stop play
Press ■.

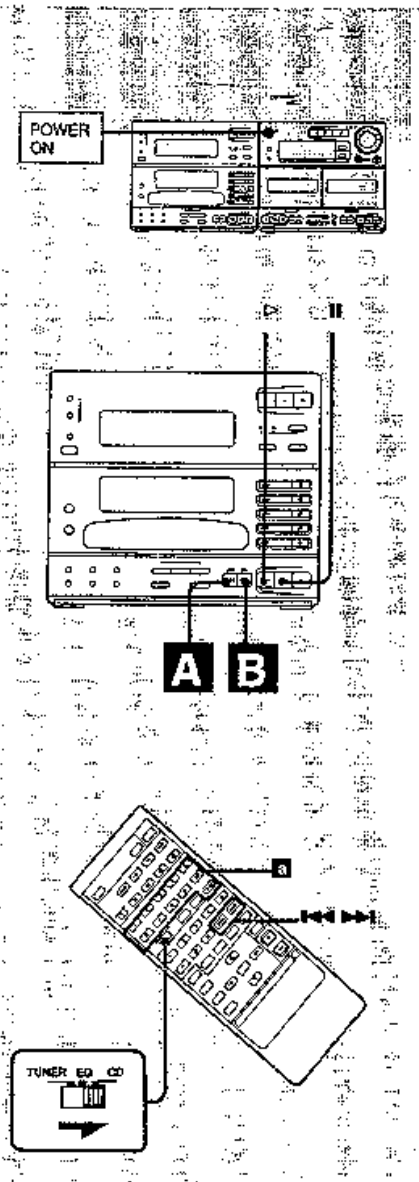
To stop for a moment during play
Press ❚❚.
To resume play, press it again.

To stop play and open the tray
Press OPEN/CLOSE ⏏.

Notes
- Disc Memo (see page 26) appears in the display during the stop mode. If the Disc Memo is not stored, the disc number, such as "-DISC-1-", is displayed.
- "NO DISC" is displayed when the disc tray is empty.

One Touch play

Press CD when the power is turned off.
If a disc has been inserted, you can listen to the disc without pressing any other buttons. If not, you can turn on the system but cannot start play.



CD Playing

Locating a Particular Selection — Automatic Music Sensor (AMS)

AMS locates the beginning of a selection.

To locate the beginning of the current or preceding selection A

Press ⏮ (⏮ on the remote commander) as many times as required.

To locate the beginning of a succeeding selection B

Press ⏭ (⏭ on the remote commander) as many times as required.

To locate a selection directly

This operation is possible only with the remote commander.

1 Set the TUNER/EQ/CD selector to CD.
2 Press the numeric button (a) for the selection.

If the selection number is greater than 10

Use the >10 and 1 to 10 buttons.
"10" functions as the figure "0".
e.g. To choose selection number 22, press ">10", "2", "2".
To choose selection number 30, press ">10", "3", "10".

Locating a Particular Point in a Selection

You can locate any particular point in the selection. This function works during play or pause.
This operation is not possible with the remote commander.

To search while monitoring the sound

To move forward at high speed B

Keep ⏭ depressed and release it at the desired point.

To move backward at high speed A

Keep ⏮ depressed and release it at the desired point.

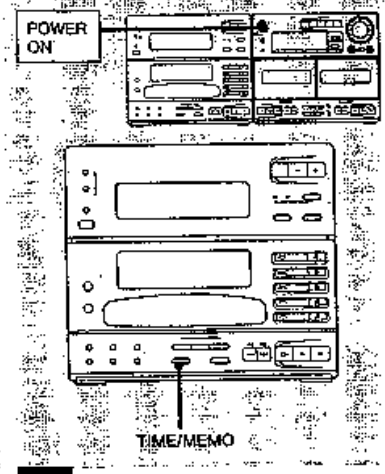
To search quickly

1 Press ⏸ to put the unit in the pause mode.
2 Keep ⏮ or ⏭ depressed.
The search speed increases, but there is no sound. Find the desired point by observing the display.
Press ⏸ again or ▷ at the desired point to play.

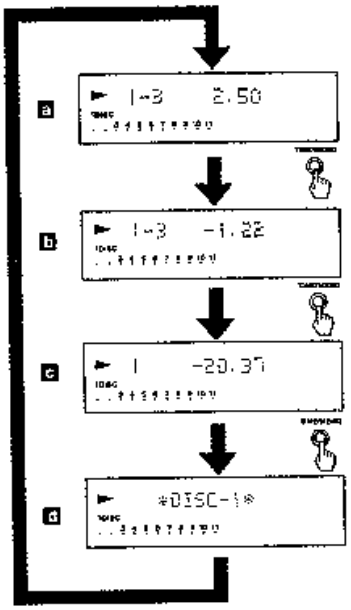
If you continue to press ⏭

If you continue to press ⏭ once the end of the disc has been reached, "OVER" appears on the display. Press ⏮ to return to the normal display.

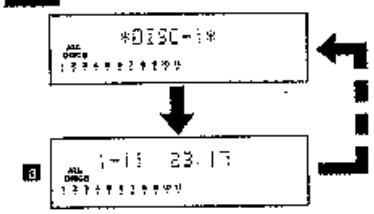
CD Playing



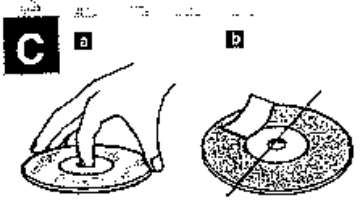
A



B



C



Information Display

This operation is not possible with the remote commander.

To change the time display A

Press TIME/MEMO during play.

The display changes to give you the following information:

- a Elapsed playing time of the current selection
- b Remaining time of the selection (If the current track number is over 20, "–.–" is displayed.)
- c Remaining time of the disc (displayed only in the Continuous Play mode)
- d Disc Memo or disc number

To know the total playing time of the disc B

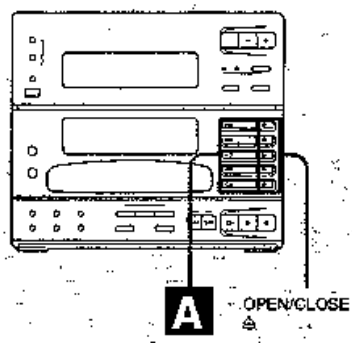
Press TIME/MEMO while stopped.

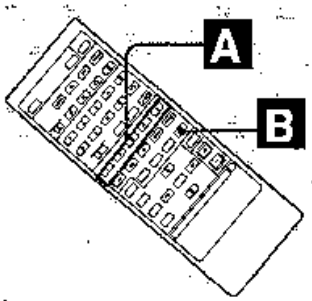
The display changes to give you the following information for a few seconds and then returns to the initial display:

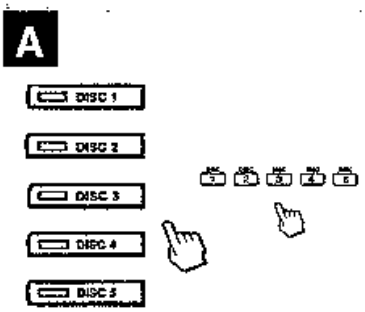
- a Disc number, total number of selections on the disc, and total playing time of the disc.

Notes on Handling Discs C

- To keep the disc clean, handle the disc by its edge. Do not touch the surface. a
- Do not stick paper or tape onto the disc. b
- Do not expose the disc to direct sunlight or heat sources such as a hot air duct, nor leave it in a car parked in direct sunlight as there can be a considerable rise in the temperature.
- After playing, store the disc in its case.







CD Playing

Selecting a Desired Disc

You can locate the beginning of any disc during play or pause, or when the player is stopped.

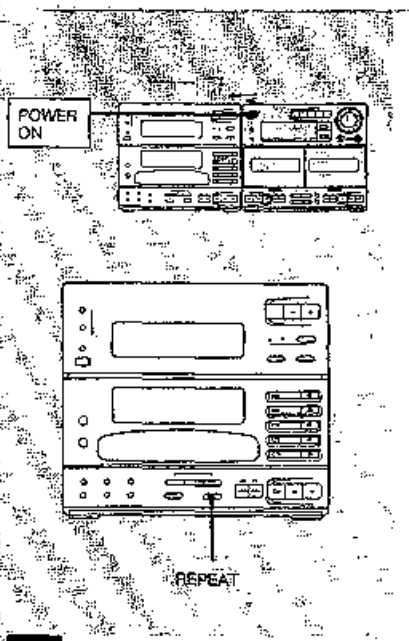
To locate the beginning of a particular disc and start playing A
Press the corresponding DISC 1 — 5 button.
During Continuous Play mode, disc play starts.

To change to the next disc B
This operation is possible only with the remote commander.

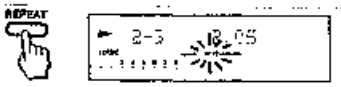
Press DISC SKIP.
During play, the player selects the next disc and starts playing.
During stop or pause, the players selects the next disc and enters stop or pause mode.

Checking the Discs in the Trays (Disc Check)

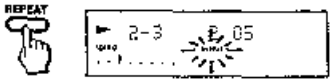
The Disc Check function allows you to check the discs in all the trays automatically.
Press OPEN/CLOSE ⏏ of any tray for more than 2 seconds.
The five disc trays automatically come out and go back in sequentially (only once for each tray).



A



B



Various CD Playing Modes

Playing Repeatedly — Repeat Play

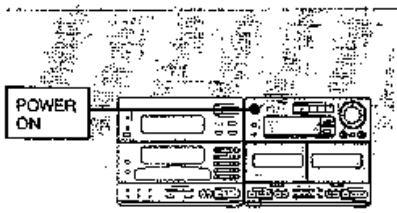
The Repeat Play function repeats a single disc or all discs during Continuous Play and Program Play, and a single disc during Shuffle Play (1 DISC mode only). During Continuous Play mode only, the player can also repeat a single selection.
This operation is not possible with the remote commander.

To repeat all the selections A
Press REPEAT once before or during play so that "REPEAT" appears on the display.
The player repeats the current playing mode.

To repeat a single selection B
Press REPEAT twice before or during play so that "REPEAT 1" appears on the display.
The player repeats the current selection.
(Operable only in the Continuous Play mode.)

Playing mode	Selections played
Continuous Play (ALL DISCS) (See page 18.)	Repeats all the selections on all discs (REPEAT), or the current selection (REPEAT 1).
Continuous Play (1 DISC) (See page 18.)	Repeats all the selections on the current disc (REPEAT), or the current selection (REPEAT 1).
Shuffle Play (ALL DISCS) (See page 21.)	You cannot play repeatedly.
Shuffle Play (1 DISC) (See page 21.)	All selections on the disc are reshuffled.
Program Play (See page 22.)	Repeats all the selections and/or programs in their programmed order.

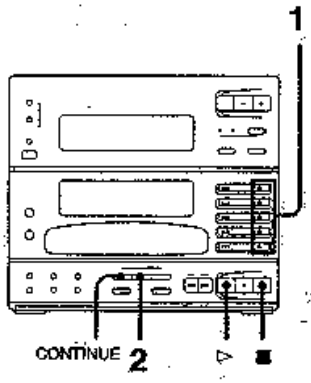
To cancel Repeat Play
Press REPEAT so that "REPEAT" or "REPEAT 1" disappears.



Various CD Playing Modes

Playing in a Random Order — Shuffle Play

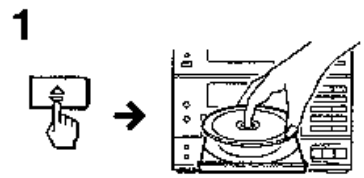
Shuffle play function plays all the selections on one disc or all discs in a random order. This operation is not possible with the remote commander.

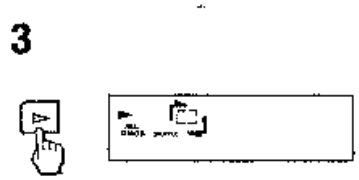


1 **Insert the disc(s) in the disc tray(s). (See page 15.)**

2 **Press SHUFFLE to choose whether to play one disc (1 DISC) or all discs (ALL DISCS).**

3 **Press ▷.**
"□" appears and then shuffle play starts.

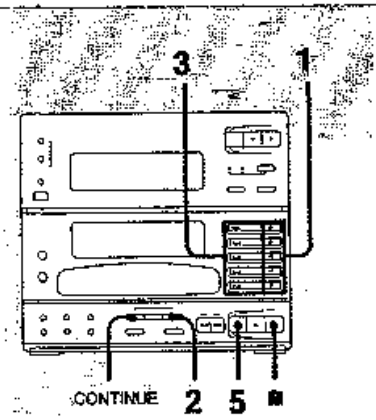


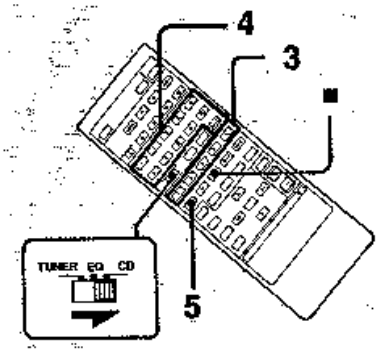


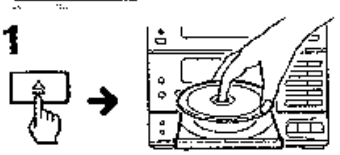
To stop play
Press ■.

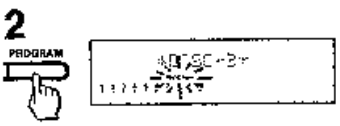
To cancel Shuffle Play
Press CONTINUE and return to the Continuous Play mode.

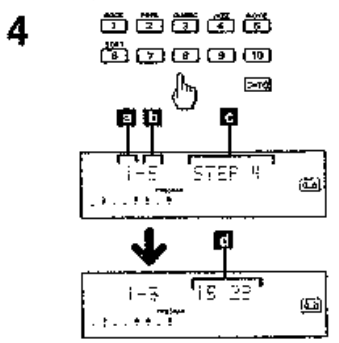
To select the desired disc
Press DISC 1 — 5 during "1 DISC" Shuffle Play. You cannot select the disc with DISC 1 — 5 during "ALL DISCS" Shuffle Play.











Various CD Playing Modes

Playing in a Desired Order — Program Play

You can make a program of up to 32 selections from all the discs in the order you want them to be played.

To program selections directly
This operation is possible only with the remote commander.

You can program directly one selection or one whole disc in each program step.

1 Insert the disc(s) in the disc tray(s). (See page 15.)

2 Press PROGRAM.
"PROGRAM" appears on the display.

3 Press DISC 1 — 5 to choose a disc.

To program all selections on the disc as one program step, repeat step 3 and choose another disc.

4 Press the numeric buttons for the desired track number in the desired order.
The display shows the following:
a Disc number
b Last programmed selection
c The order to be played
and then changes to show **d** the total playing time.

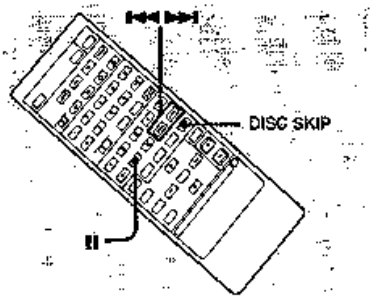
To program additional selections from the same disc, repeat step 4.
To program additional selections from another disc, repeat steps 3 and 4.

5 Press ▷.

To stop play
Press ■.
To replay the same program, press ▷.

To resume normal play
Press CONTINUE and return to the Continuous Play mode. The program is erased.

Various CD Playing Modes



To program selections while checking the total time

1 Press DISC SKIP instead of DISC 1 — 5 to choose the desired disc, and press I◁◁ ◀◀ and ▶▶ ▷▷I (I◀◀ and ▶▶I on the remote commander) instead of the numeric buttons to choose the desired selection.
2 Check the total time, and repeat step 1 if not satisfactory.
3 Press PROGRAM while the total time or step number is flashing.

To check the program

This operation is possible only with the remote commander.

Press CHECK.
The display shows the information about the programmed selections: the disc number, the track number, and the order to be played. Each time you press CHECK, the next selection in the program appears, and after the last selection, "CHECK END" appears.

If the selection number is greater than 10

Use the >10 and 1 to 10 buttons. "10" functions as the figure "0".

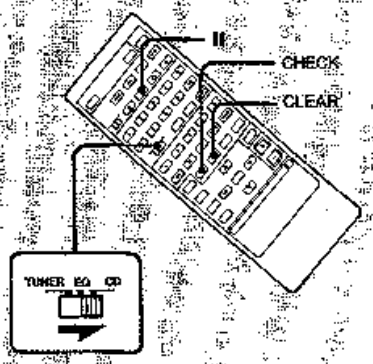
e.g. To choose selection number 22, press ">10", "2", "2".
To choose selection number 30, press ">10", "3", "10".

The display does not show the total playing time in step 4 if:

- you have programmed a selection whose track number is over 20.
- the total time has exceeded 1,000 minutes.

To see the "STEP" display

Press TIME/MEMO in the stop mode.
The total playing time display changes to the display showing the number of programmed selections ("STEP") for 1 second.



Various CD Playing Modes

Changing the Program

To erase the programmed selections

To erase the entire program

Press ■ once during stop; twice during play. "ALL CLEAR" appears.

The whole program is erased also when:

- you turn off the power.
- you select other playing modes.

To erase the last selection in a program

This operation is possible only with the remote commander.

Press CLEAR while stopped.

The last selection is erased each time you press CLEAR.

To erase a specific selection

This operation is possible only with the remote commander.

1 Press CHECK repeatedly until the selection to be erased appears.

2 Press CLEAR.

To erase the program for a whole disc

Press OPEN/CLOSE ⏏ for that disc.

To add a selection to the end of a program

This operation is possible only with the remote commander.

Press DISC 1 — 5 and the desired numeric button(s).

Making a Program for Editing a Tape

You can divide your program into programs A and B by inserting a pause between them. Use this function to make a program for both sides of a tape at one time.

1 Program the selections for side A.

2 Press II.
"B" and "PAUSE" appear, and the total playing time is reset to "0.00".

3 Program the selections for side B.

To play the program for side B

When the selections for side A have been played, the unit will pause and "B" appears on the display. Press ▷ or II to start playing.

To record the program

Follow the procedures for "Synchronized CD Recording" on page 39. When you select ⮌ for the direction mode of the cassette deck, the tape reverses automatically while the CD player is in the pause mode, and the recording for side B starts automatically.

Note

Be sure to program the selections so that the total playing time of each side does not exceed the length of one side.

Custom Files

On Custom Files

The unit is equipped with a memory which allows you to store two types of information called "Custom Files". Custom Files for up to 184 discs can be retained in the unit's memory.

The types of Custom Files

Disc Memo	To store a name of up to 10 letters for an individual disc (Page 26)
Sound Field File	To store the sound effect adjusted with the Sound Field Coordinator system (Page 27)

Memory back up for the Custom Files

Custom Files, once memorized, are retained in the unit's memory for approximately 1 month without AC power supply. Since the memory is stored in the CD player and not on the disc, you cannot perform Custom File functions with the same disc on a different player.

What is this indication?

FILE FULL — This indication appears when MEMO INPUT or S.F.FILE is pressed when no Custom File can be memorized for the disc currently put in the player. To make a Custom File for the disc, clear the Custom File of another disc.

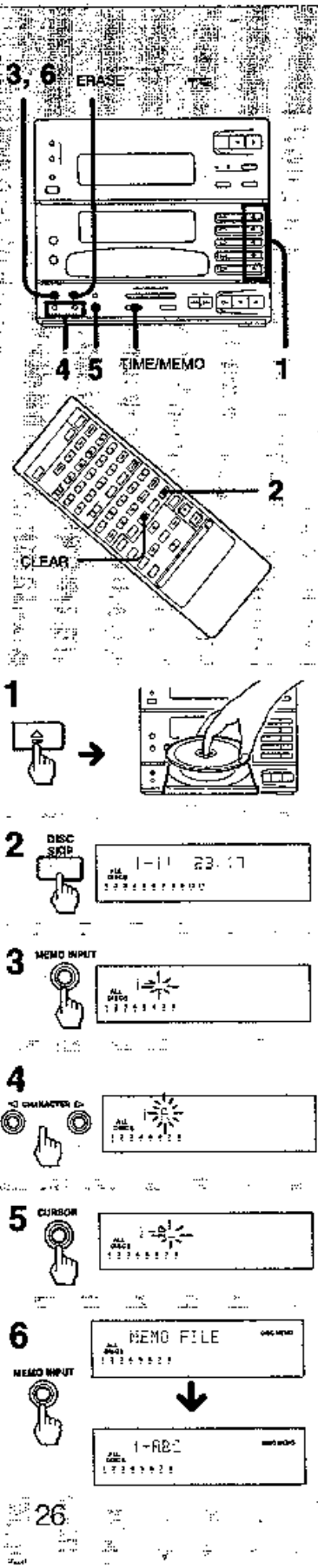
To clear Custom Files of all discs at once

When all the trays are empty, press SYSTEM POWER to turn on the unit while keeping ERASE pressed. "ALL ERASE" will be displayed and all Custom Files are cleared.

To check all the items of the Custom Files

Press TIME/MEMO while "NO DISC" is displayed (when all the trays are empty). Each time you press TIME/MEMO, the Disc Memos appear and "DISC MEMO" and/or "S.F.FILE" indications light up sequentially. If you press TIME/MEMO when the last disc's information is displayed, "CHECK END" is displayed and returns to "NO DISC" after a few seconds. To clear the Custom File for a single disc, press TIME/MEMO repeatedly until the undesired Custom File is displayed. Then press ERASE. "FILE ERASE" is displayed.

Custom Files



Assigning Names to a Disc — Disc Memo

You can assign a name within 10 characters (letters or symbols) for each disc using the Disc Memo function. The name appears on the display every time you put the disc in the player. One name can be assigned for one disc.

1 Insert the disc(s) in the disc tray(s). (See page 15.)

2 Press DISC SKIP to choose the disc.
Note
Make sure that the total number of selections and the total playing time are displayed before going on to the next step.

3 Press MEMO INPUT.
The cursor under the first character flashes. (The name of the Disc Memo appears if you have already assigned a name to that disc.)

4 Press CHARACTER ◁ or ▷ to select the letter or symbol for the first character while the character is flashing. (See "Usable letters and symbols" below.)

5 Press CURSOR.
The cursor moves to the next character.

Repeat steps 4 and 5 to make a name (up to 10 characters).

6 Press MEMO INPUT.
"MEMO FILE" appears.
The Disc Memo is memorized, and "DISC MEMO" appears on the display.

Usable letters and symbols

79 kinds of letters and symbols and a space can be used for the Disc Memo. When you press CHARACTER ◁/▷ for the first time a space appears, and each time you press CHARACTER ▷, the letters and symbols appear in the following order:

(space) ABCDEFGHIJKLMNOPQRS TUVWXYZ&
abcdefghijklmnopqrstuvwxyz ' , . : = [ ] ( ) ! ? * / + – ||| 9876543210

Press CHARACTER ◁ to call up a previous letter or symbol.

Note
You can input a Disc Memo only when the player is in the stop mode.

To rewrite letters or symbols

Before step 6
Press CURSOR so that the letter/symbol to be changed flashes, and then select the desired letter/symbol by pressing CHARACTER ◁/▷.
To delete the letter/symbol, press CLEAR on the remote commander.

After step 6
Repeat from step 2.

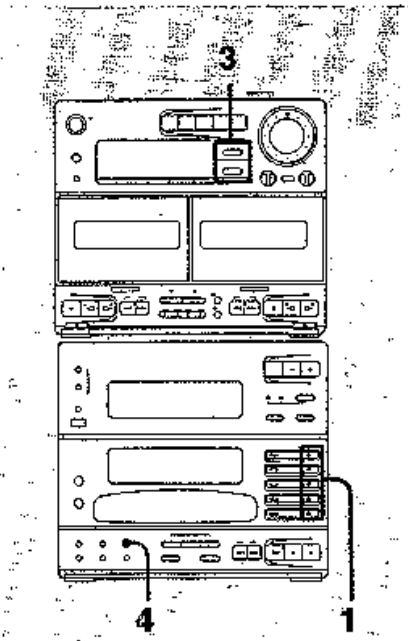
To display the Disc Memo for the disc being played

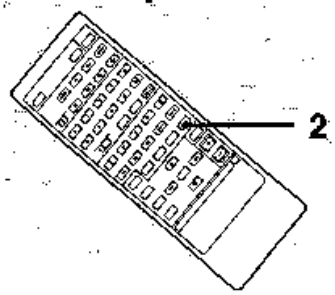
Press TIME/MEMO twice during Shuffle or Program Play, and three times during Continuous Play. To return to the normal display, press TIME/MEMO again.

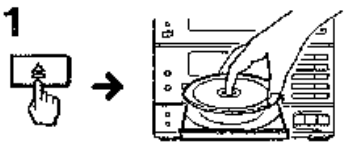
To erase the Disc Memo

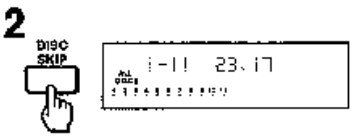
1 Insert the disc with the Disc Memo to be erased in one of the disc trays.
2 Press MEMO INPUT.
The Disc Memo appears, and the first character flashes.
3 Press ERASE.
"FILE ERASE" appears and "DISC MEMO" indication disappears.

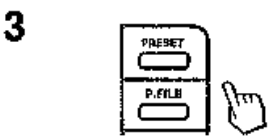
You can also erase a Disc Memo by changing all the characters of that name into "spaces".

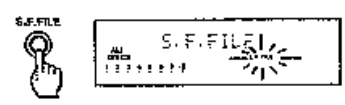












Custom Files

Storing the Sound Adjustment — Sound Field File

You can store the sound that you adjusted using the preset equalizer settings (page 43) or Personal File (page 46) for each disc.

1 Insert the disc(s) in the disc tray(s). (See page 15.)

2 Press DISC SKIP to choose the disc.
Note
Make sure that the total number of selections and the total playing time are displayed before going on to the next step.

3 Select the desired preset equalizer setting or Personal File (see pages 43 and 46).

4 Press S.F.FILE.
The sound adjustment is memorized and "S.F.FILE" appears on the display.

To memorize a new sound adjustment on the disc
Repeat steps 2 to 4.

To call up the Sound Field File

The stored setting is called up when you insert a disc with Sound Field File only when "CD" is selected for the program source and when:
— the total playing time for that disc is displayed
— you start playing
— that disc is selected during Shuffle Play or Program Play.

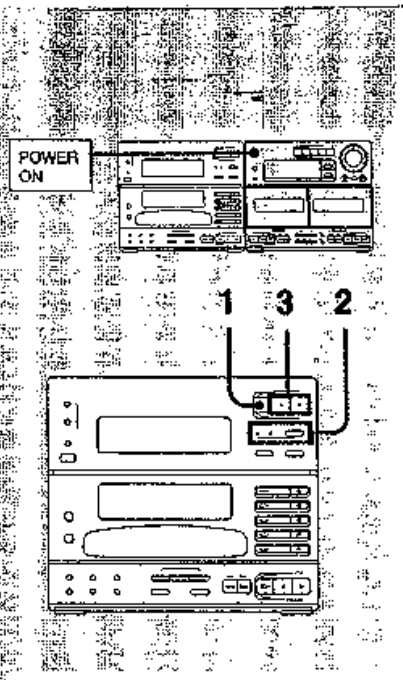
The setting is not called up while checking the Custom Files (page 25).

To erase the Sound Field File

1 Insert the disc with the Sound Field File that you want to erase.
2 Press S.F.FILE.
3 Press ERASE while "S.F.FILE" is displayed.
"FILE ERASE" appears and the "S.F.FILE" indication disappears.

Radio Reception

Automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use manual tuning.

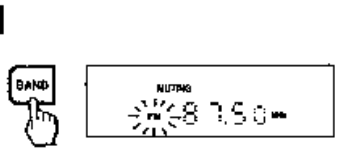


Tuning in Automatically

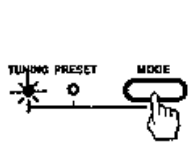
1 Press BAND repeatedly until the desired band appears.
As you press BAND, the band changes as follows:

For Germany and Italy:
FM ↔ AM

For other countries:
FM → MW → LW

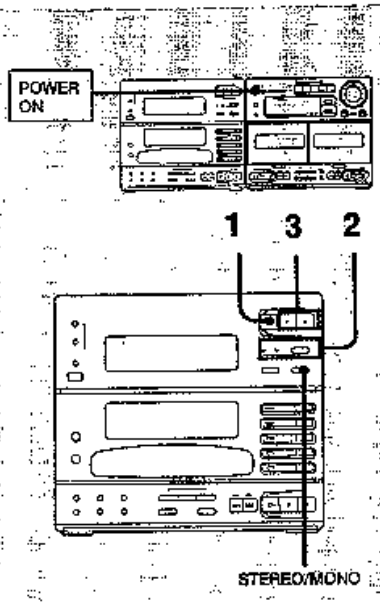


2 Press MODE so that the TUNING indicator lights up.

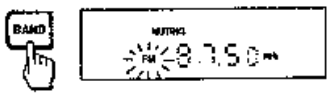


3 Keep – or + depressed for more than 1 second.
"AUTO" appears on the display and the unit tunes in to a station automatically.

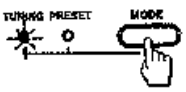
Repeat step 3 until the desired station appears.



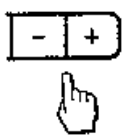
1



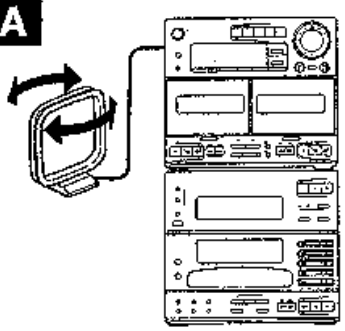
2



3



A



Radio Reception

Tuning in Manually

1 Press BAND repeatedly until the desired band appears.

2 Press MODE so that the TUNING indicator lights up.

3 Press – or + repeatedly until the desired station appears.

Indications on the display

TUNED: Appears when a station with sufficient signal strength is tuned in.

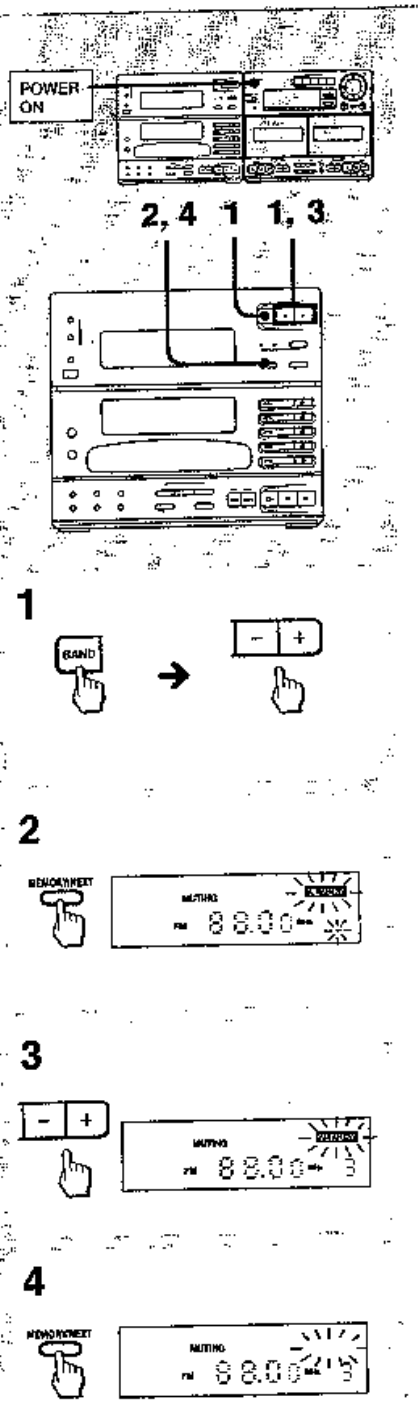
STEREO: Appears when an FM stereo program with sufficient signal strength is received.

Antenna adjustment A

For AM or MW/LW reception, find the best location for the supplied AM loop antenna.

When an FM program is noisy or hard to receive

Press STEREO/MONO so that "MONO" appears on the display. There will be no stereo effect, but the reception will be improved. Press the button again to restore the stereo effect.



Radio Reception

Storing Stations

You can store stations in a desired sequence, so that you can tune in to the stored station directly by entering the preset station number.

For Germany and Italy:

- You can store 20 FM stations and 10 AM stations.

For other countries:

- You can store 20 FM stations, 10 MW stations and 10 LW stations.

This operation is not possible with the remote commander.

1 Tune in to the desired station.

2 Press MEMORY/NEXT.
"MEMORY" and the preset station numbers appear on the display.

3 While "MEMORY" is on (for several seconds), press – or + to select a desired preset number.

4 Press MEMORY/NEXT.
"MEMORY" disappears, and the station is stored.

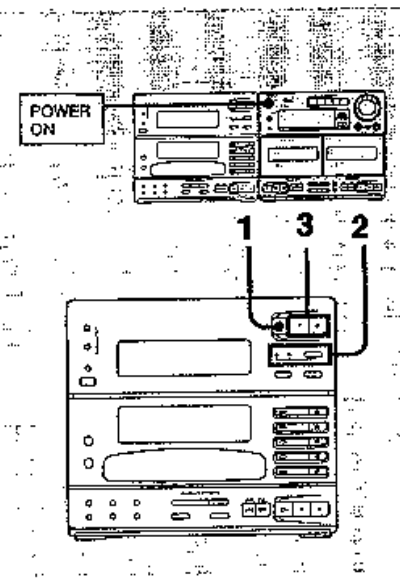
Repeat steps 1 to 4 for each station to be stored.

If you cannot store a station successfully
Press MEMORY/NEXT again so that "MEMORY" appears, and then proceed with steps 3 and 4 above.
Be sure to operate while "MEMORY" is on (about 4 seconds).

When you have selected the wrong preset station number
Press MEMORY/NEXT again and then proceed with steps 3 and 4.

To change the preset station
Store a desired station under the desired preset number by proceeding with the above steps.
The station previously preset will be replaced with the new station.
Erasing only is not possible.

Radio Reception



Tuning in to a Preset Station

1 Press BAND to select a desired band.

2 Press MODE so that the PRESET indicator lights up.

3 Press – or + to select the desired preset station number.

To tune in to a preset station directly A

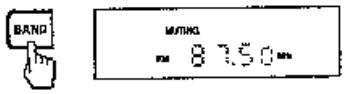
This operation is possible only with the remote commander.

1 Set the TUNER/EQ/CD numeric button function selector to TUNER.
2 Press BAND to select a desired band.
3 Press the numeric buttons to select the desired preset station number.

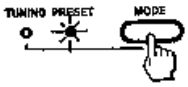
One Touch Play

Press TUNER when the power is turned off. You can listen to the last received station without pressing any other buttons.

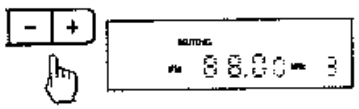
1



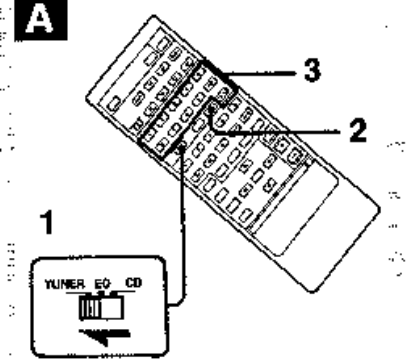
2

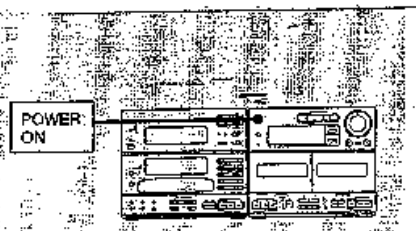


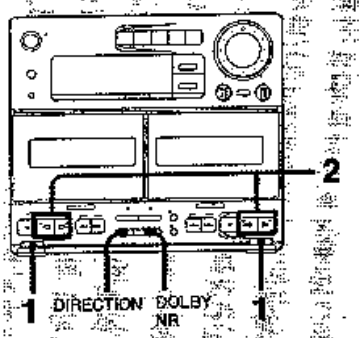
3

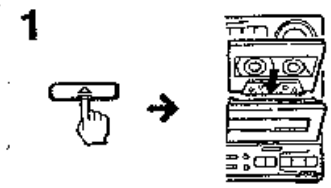


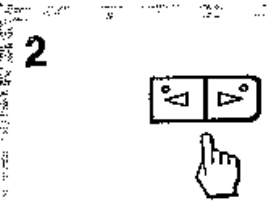
A

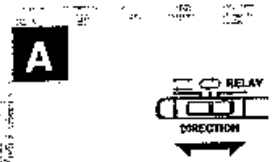


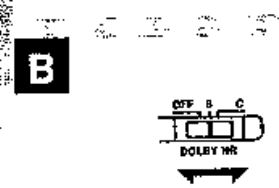












Tape Playback

Playback Operation

1 Insert a tape into deck A or deck B.

2 Press ▷ (for front-side playback) or ◁ (for reverse-side playback).

To stop playback
Press ■.

To stop for a moment during play (deck B only)
Press ⏸.
To resume play, press it again.

How to select the direction mode setting

A

Set the DIRECTION selector to the desired position.

To play back one side: select ⇄.
To play back both sides: select ⇆.
To play back both decks in succession: select RELAY. (See page 34.)

The direction mode setting is effective for both decks.

When you play back both decks
You can listen to the playback of only the tape in deck A.

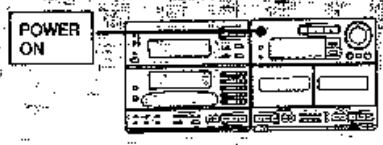
When listening to a cassette recorded with the Dolby noise reduction system* B
Set the DOLBY NR selector to B or C. The setting is active for both decks.

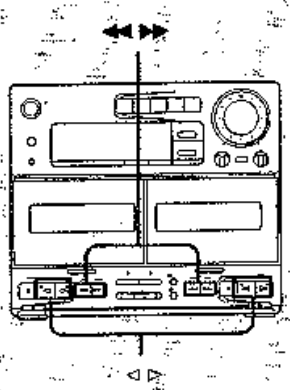
What is the Dolby NR system?
Dolby NR (noise reduction) system reduces tape hiss noise in low-level high-frequency signals. The system boosts these signals during recording and lowers them during playback.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

One Touch Play

Press TAPE when the power is turned off. If a tape has been inserted, you can listen to the tape without pressing any other buttons. If not, you can turn on the system but cannot start playback.





Tape Playback

Locating the Beginning of a Selection during Playback — Automatic Music Sensor (AMS)

AMS locates the beginning of a selection by detecting the blank space between selections. To assure the correct operation of AMS, there must be a blank of 3 seconds or more between selections.
Use the left-side buttons for deck A and the right-side buttons for deck B.

1 **Press ◁ or ▷ to start playback.**

2 **Press AMS ◀◀ or AMS ▶▶ referring to the following table.**

Side of the cassette being played	Desired selection	
	Next selection	Selection being played
Front side (▷)	▶▶	◀◀
Reverse side (◁)	◀◀	▶▶

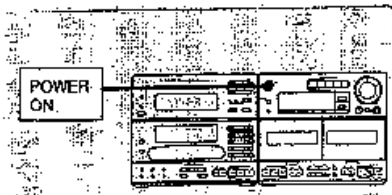
Playing Back Automatically after Fast Winding — Auto Play

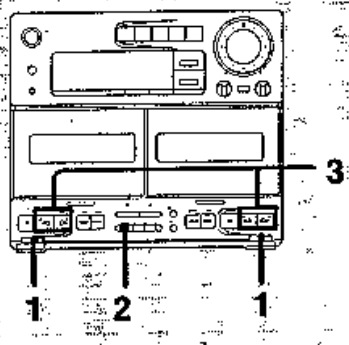
This function starts playback automatically from the beginning of the side after fast winding.

To start playback from the beginning of the front side
Press ▷ while keeping ◀◀ pressed.

To start playback from the beginning of the reverse side
Press ◁ while keeping ▶▶ pressed.

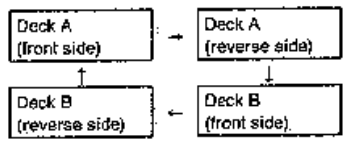
Tape Playback





Playing Both Decks in Succession — Relay Play

Relay play always follows the sequence below regardless of where playback starts. When playback of the reverse side of the tape in deck B is complete, the following sequence continues 4 more times.

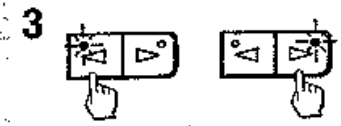


1 **Insert recorded cassettes in both decks.**

2 **Set the DIRECTION selector to RELAY.**

3 **Press ◁ or ▷ on either deck.**

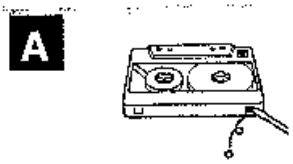
To stop relay play
Press ■.

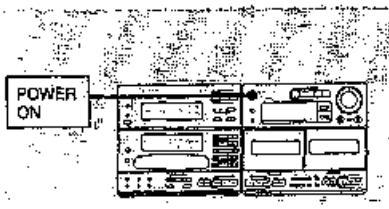


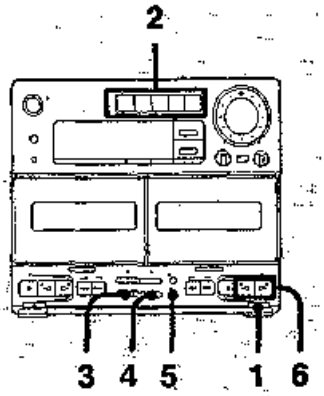
Notes on Cassettes

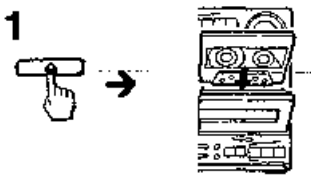
To protect recording A
Break out the tab on the left shoulder of the cassette side of which recording is to be protected.

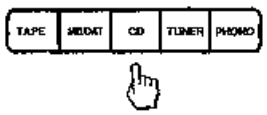
To re-record the cassette B
Cover each slot with plastic tape.
When using a type II (CrO_2) or type IV (METAL) cassette, be careful not to cover the detector slots which are necessary for automatic tape type detection. C











Recording (Deck B)

Recording Operation — Manual Recording

This operation is not possible with the remote commander.

1 Insert a blank tape into deck B.

2 *Select a program source and play it.*

3 Set the DIRECTION selector.
To record on one side, select ⇄.
To record on both sides, select ⟲.

4 Set the DOLBY NR selector.
To use the Dolby NR system, select B or C. Otherwise, select OFF.

5 Press ● REC.
The cassette deck enters the recording pause mode.

6 *Start recording.*

Recording side	Indicator	Button to press
For front-side recording	◁ ▷	Press ▷ once.
	◁ ▷	Press ▷ twice.
For reverse-side recording	◁ ▷	Press ◁ once.
	◁ ▷	Press ◁ twice.

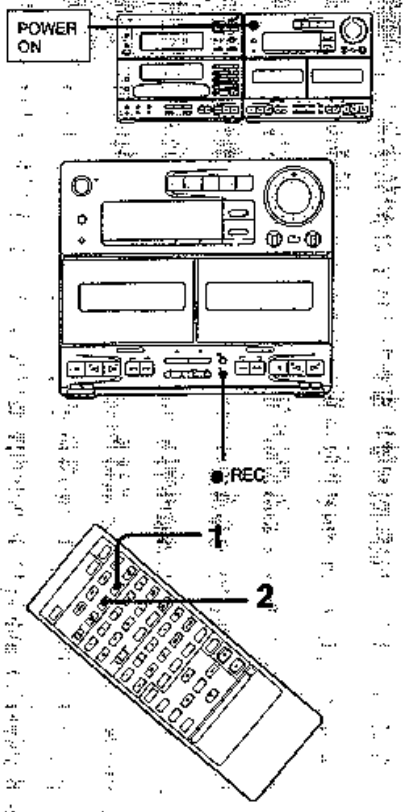
7 Start playing the program source to be recorded.

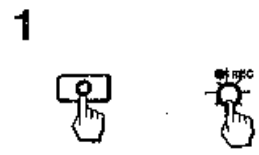
To stop recording
Press ■.

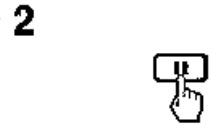
When you press ◁ or ▷ twice
The first press reverses the direction of the tape, and the second press releases the recording pause mode and starts recording.
You can also release the pause mode by pressing ❚❚.

The sound you record
Normally, you can record the sound you have adjusted with the Sound Field Coordinator (graphic equalizer and surround effect).
If you want to record the sound from a program source without any effects, press EFFECT on the amplifier section so that "EFFECT OFF" appears on the display. Recording sound that you have boosted with the graphic equalizer and surround effects may cause distortion. In this case, adjust the effect level again.

Notes
- Even if you select ⟲ or RELAY for the direction mode, recording stops at the end of the reverse side. To record both sides, be sure to start with the front side.
- The recording level is fixed and cannot be adjusted manually.







Recording (Deck B)

Inserting a Blank Space during Recording

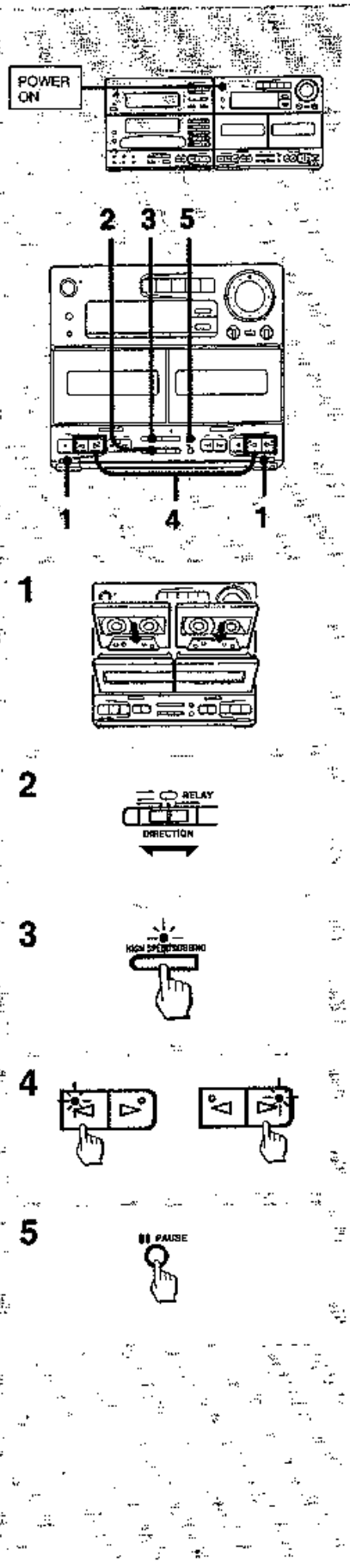
This operation is possible only with the remote commander.

1 Press ○ while recording at the position where the blank space is to be inserted.
The indicator on the ● REC button flashes and the tape runs without recording. After 4 seconds, the unit enters the recording pause mode.

2 Press ❙❙ at the position where you want to start recording again.
Recording restarts.

To make a blank of more than 4 seconds
Press ○ for as long as needed.
The indicator on the ● REC button flashes faster after 4 seconds have elapsed. The tape pauses when ○ is released.

To make a blank within 4 seconds
Press ● REC while the indicator on the ● REC button is flashing.



Tape Dubbing (from Deck A to B)

Dubbing the Whole Tape

This operation is not possible with the remote commander.

1 Insert a recorded tape in deck A and a blank tape in deck B.

2 Set the DIRECTION selector.
To dub on one side, select ⇀
To dub on both sides, select ⇄ or RELAY.
(See "Notes on direction mode setting" on the right.)

3 Press HIGH SPEED DUBBING.

4 Press ◁ or ▷ to select the same direction on both decks.
To dub on one side, select ◁ or ▷.
To dub on both sides, select ▷.

5 Press II PAUSE on deck B.
Dubbing starts.

To stop dubbing
Press ■.

Notes
- During dubbing, only ■ is operative.
- You cannot dub the adjusted sound.

Notes on direction mode setting

Position	Operation
⇀	Dubbing stops at the end of one side of the tape.
⇄	When the tape in one deck comes to the end of the front side, it reverses immediately regardless of the tape position in the other deck.
RELAY	When the tape in one deck reaches the end of its front side, it stops until the other tape comes to an end, and then both tapes reverse together.

When dubbing starts from the reverse side in the RELAY mode
At the end of the reverse side, dubbing stops automatically.

Is it necessary to set DOLBY NR?
No. The tape in deck B is automatically recorded in the same state as the tape in deck A.

If the direction indicator on the play button flashes 3 times and disappears
The tab(s) of the cassette inserted into deck B has(have) been removed. Dubbing is not possible on that cassette. Cover the slot with plastic tape. (See page 34.)

Is it possible to listen to a program source other than a tape during dubbing?
Yes. You can select any program source.

Recording the adjusted sound
When dubbing using the HIGH SPEED DUBBING button, it is not possible to record the sound adjusted with the Sound Field Coordinator.
To record the adjusted sound, follow the "Manual Recording" procedure and choose "TAPE" as the program source.

Synchronized CD Recording

Overview of Synchronized CD Recording

You can start CD playing and tape recording simultaneously with the Synchronized CD Recording function.

When you record a CD without programming (Fade Synchro function) A

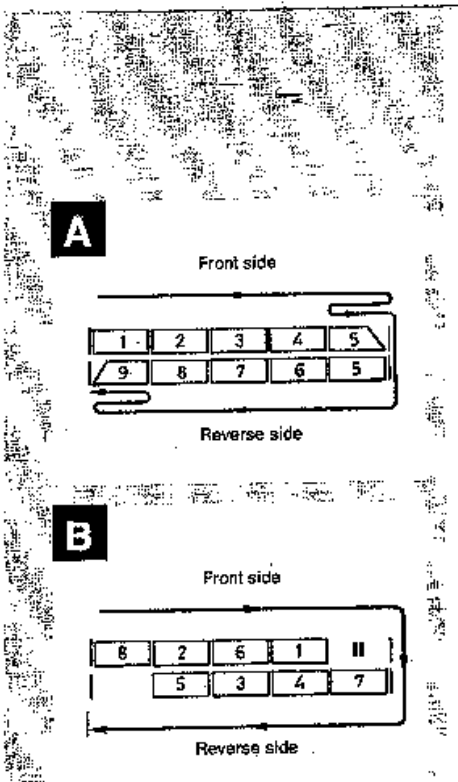
The selection at the end of the tape does not break abruptly in the middle, but fades out automatically. The deck records the selections in the order on the disc. If the tape ends in the middle of the selection, the player rewinds the tape to the beginning of that selection. Then the selection is re-recorded so that it fades out naturally at the end of the tape.

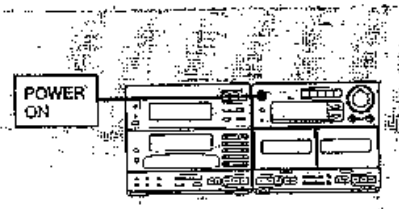
If the recording is to be continued onto the reverse side, the selection that faded out on the front side is recorded again from the beginning on the reverse side.

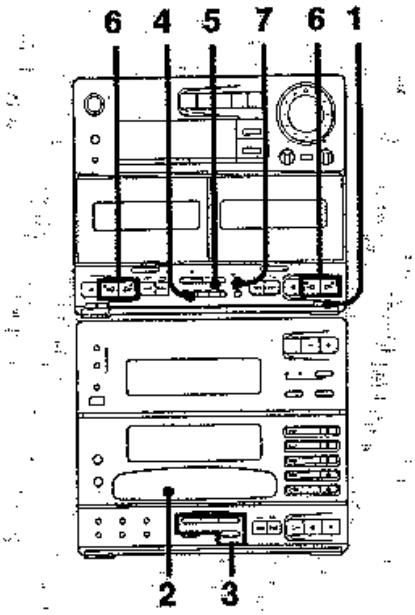
When you record a programmed CD with the Synchronized CD Recording function B

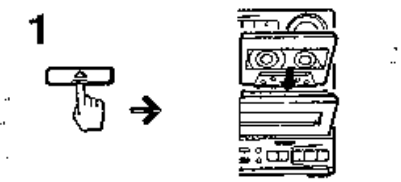
When you use the synchronized CD recording function, the CD playing and the tape recording start simultaneously. If you set the DIRECTION selector to ⇄, you can record on both sides of the tape automatically. To separate the selections for sides A and B, program a pause between them.

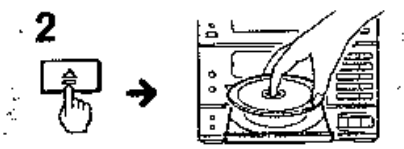
When the side A program is finished and the CD player enters the pause mode, the cassette tape continues recording until the end of side A is reached; the tape then reverses, and the side B program begins to play/record. Even after all of the selections are recorded, the deck keeps recording with no sound for 4 seconds more.

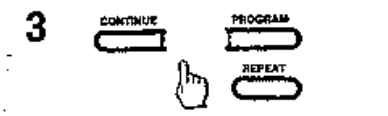


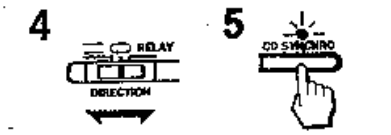












Synchronized CD Recording

Recording without Breaking a Selection Abruptly at the End of a Tape — Fade Synchro Recording

This operation is not possible with the remote commander.

1 **Insert a blank tape into deck B.**

2 **Insert the disc(s) in the disc tray(s).**
(See page 15.)

3 **Select the desired playing mode.**
(See pages 16, 20 and 22.)
If necessary, press DISC SKIP to choose a disc.

Note
Make sure that the total number of selections and total playing time appear on the display.

4 **Set the DIRECTION selector.**
To record on one side, select ⇒.
To record on both sides, select ⇄.

5 **Press CD SYNCHRO.**
Deck B enters the recording pause mode.

6 **If the desired direction indicator on the play button does not light, select the side to be recorded by pressing ◁ or ▷.**
To record on the front side or both sides, press ▷.
To record only on the reverse side, press ◁.

7 **Press II PAUSE.**
Recording starts. After about 10 seconds, the CD playing starts.

To stop recording
Press ■ on the cassette deck and/or the CD player.

Note
If the tab on the cassette has been removed, the CD SYNCHRO button does not operate.

Is it possible to listen to program sources other than CD during CD recording?
No. If you select another function, the selected program source will be recorded.

When you record more than one disc
The cassette deck automatically runs without recording and then enters recording pause mode while the CD player is changing the disc trays.

CD Program Editing

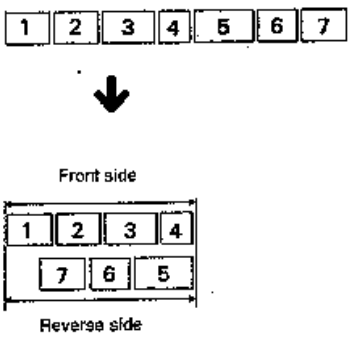
Editing the CD for Recording — Tape Select Edit

The Tape Select Edit Function automatically selects and indicates the tape length for each disc which is most suitable for recording the disc.

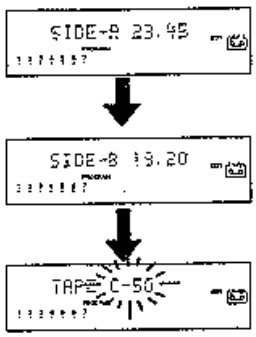
How the Tape Select Edit Function works

The player divides all the selections on a disc into two so that you can record them on sides A and B of a tape, without changing the order of the selections (A). Then the player decides the suitable tape length according to the total playing time for one side (B).
You can record both sides automatically once you start recording when you use the Synchronized Start Function.

A



B



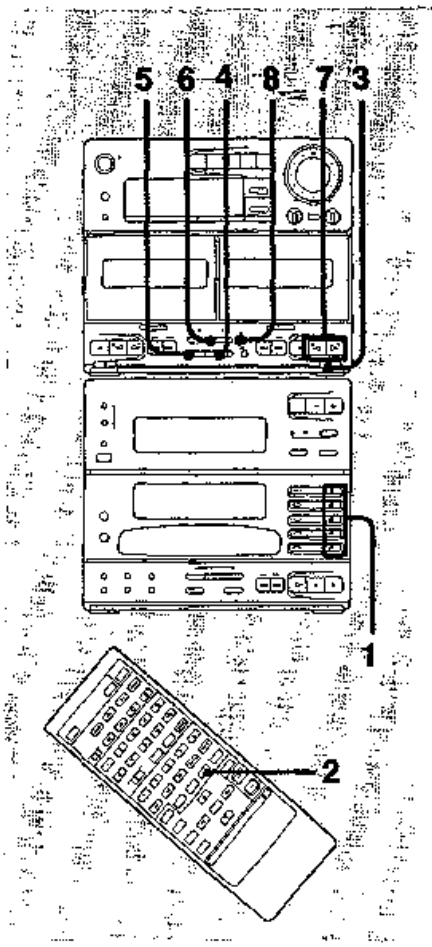
The tape length is selected from one of the following choices:

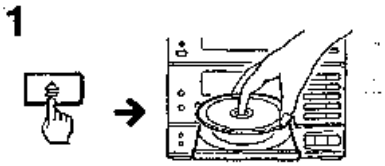
Indication	Tape length (total for both sides)
C-10	10 minutes
C-20	20 minutes
C-30	30 minutes
C-40	40 minutes
C-46	46 minutes
C-50	50 minutes
C-54	54 minutes
C-60	60 minutes
C-64	64 minutes
C-70	70 minutes
C-74	74 minutes
C-80	80 minutes
C-90	90 minutes
OVER C-90*	more than 90 minutes

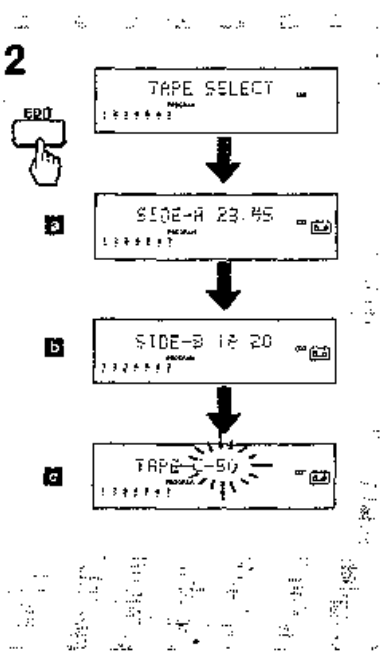
* When "OVER C-90" appears, you have to decide the tape length according to the total playing time of the longer side.

Notes

- The Tape Select Edit Function does not work for discs which contain more than 31 selections.
- With some discs which contain more than 20 selections, the player does not show the total playing time nor the tape length even after pressing EDIT in step 2 on page 41. In this case, you cannot use the Tape Select Edit Function with that disc.







CD Program Editing

Tape Select Edit operation

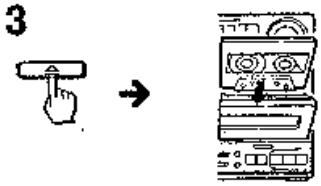
1 Place a disc in the disc tray.
(See page 15).
If necessary, press DISC SKIP to choose a disc.

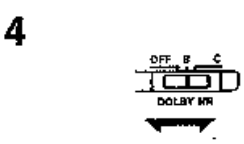
Note
Make sure that the total number of selections and total playing time appear on the display.

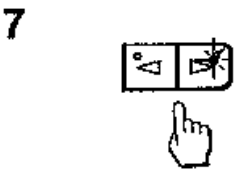
2 Press EDIT.
"TAPE SELECT" appears on the display, and the player divides the selections automatically.
Then the display changes as follows:
a total playing time for side A
b total playing time for side B
c tape length

(to be continued)

CD Program Editing







(continued)

3 Insert a blank tape of the indicated tape length (or a longer tape) into deck B.

4 Set the DOLBY NR selector.

5 Set the DIRECTION selector to ⊂⊃.

6 Press CD SYNCHRO.
Deck B enters the recording pause mode.

7 If the direction indicator on the ▷ button does not light, select the side to be recorded by pressing ▷.

8 Press II PAUSE on deck B.
Recording starts. After about 10 seconds, the CD playing starts.

To stop recording
Press ■ on the cassette deck and/or the CD player.

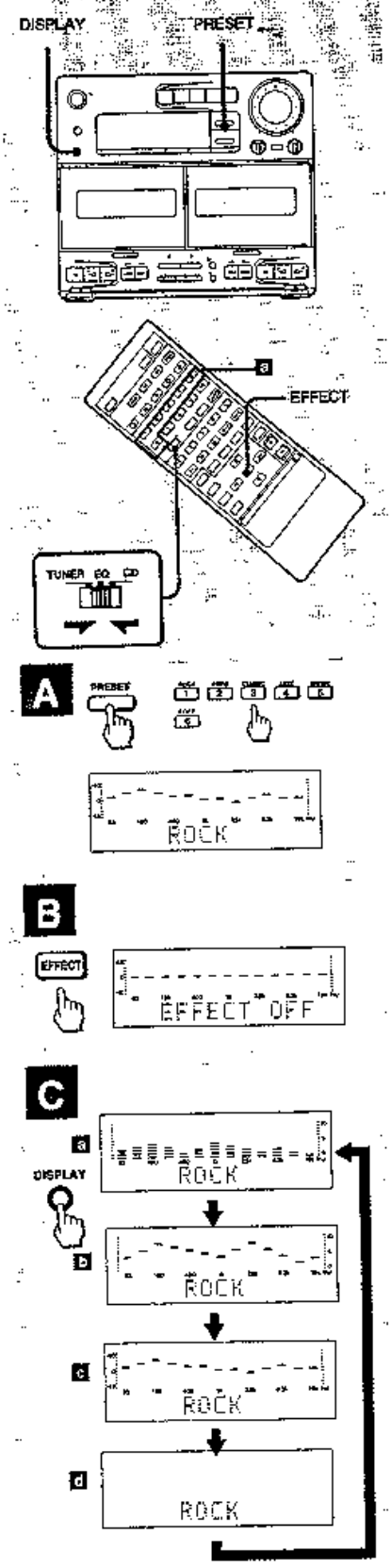
To resume normal play
Press CONTINUE.

To check the program
Press CHECK.
In the display window, "A" appears while checking the program for side A, and "B" appears while checking the program for side B.

Notes

- Do not press any buttons other than those mentioned in the procedure during Tape Select Edit.
- When the tab on the cassette has been removed, the CD SYNCHRO button does not operate.

Adjusting the Sound Effects



Making Use of the Preset Equalizer Settings

When the system is shipped from the factory, 6 specially recommended settings of the graphic equalizer and surround effects are stored. You can enjoy the sound effects by simply choosing from the preset settings according to the program source.

Press the desired numeric button (2) on the remote commander by referring to the table below. A

	Display	Applications
1	ROCK	For rock music
2	POPS	For intensifying the vocal sound
3	CLASSIC	For music with a great deal of reverberation, such as classical music
4	JAZZ	For jazz
5	MOVIE	For DOLBY surround encoded video programs
6	SOFT	For background music

You can also select the preset equalizer setting by pressing PRESET on the front panel repeatedly.

When you do not want to apply the Sound Field Coordinator effect B

Press EFFECT so that "EFFECT OFF" appears on the display. The equalizer curve becomes flat.

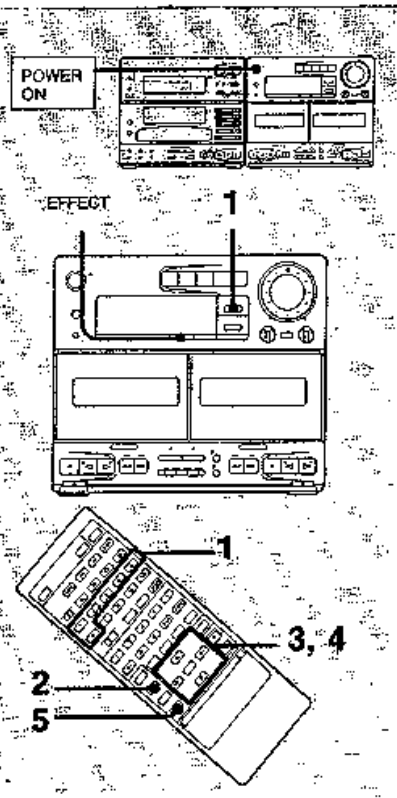
Changing the Display C

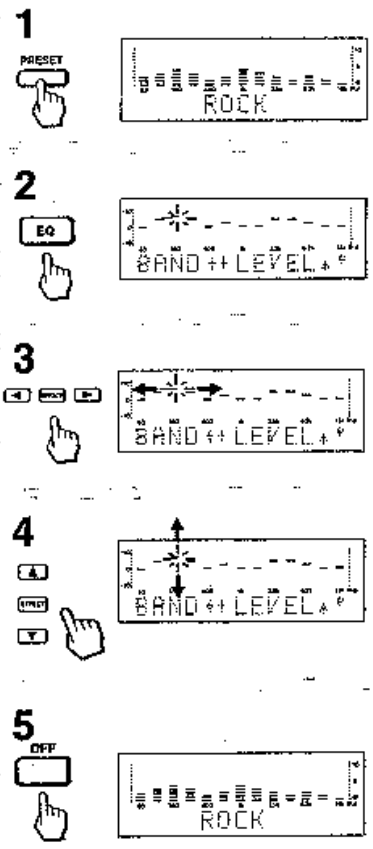
The equalizer has four display modes. To change the display, press DISPLAY. This operation is not possible with the remote commander.

The display changes as follows:

a Spectrum analyzer display 1
b Spectrum analyzer display 2
c Equalizer curve display
d No display

Adjusting the Sound Effects





Adjusting the Equalizer Curve

This function allows you to adjust the sound by raising and lowering the levels of specific frequency ranges.
This operation is possible only with the remote commander.

1 Select a preset equalizer setting that becomes the basis for the new effect. (See page 43.)
(To make adjustments without using any sound effect, press EFFECT to display "EFFECT OFF".)

2 Press EQ so that the equalizer curve and "BAND ← → LEVEL ↑↓" appear on the display.

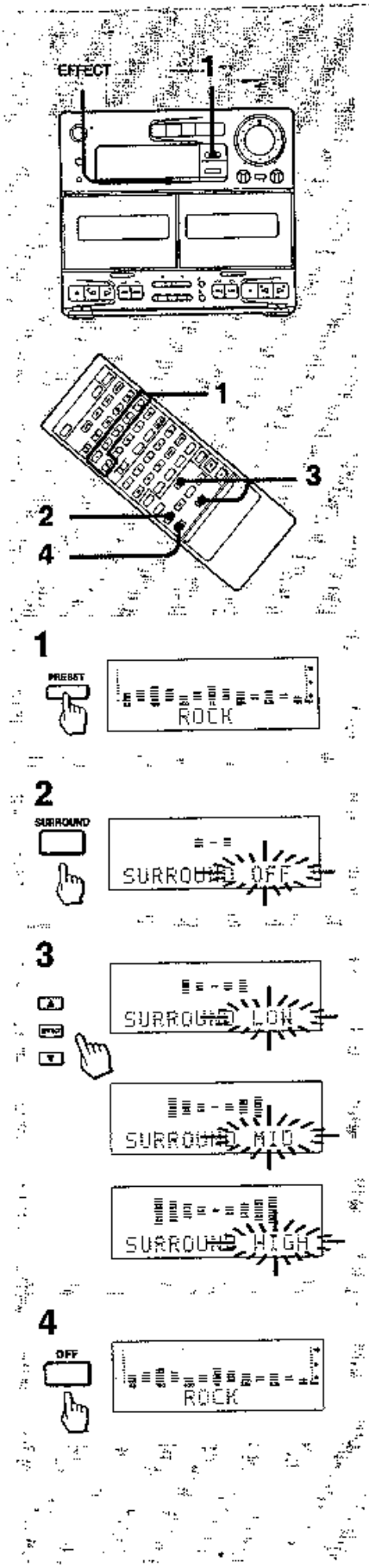
3 Select the frequency range you wish to adjust using CURSOR CONTROL ◄ or ►.

4 Raise or lower the level of the frequency range with CURSOR CONTROL ▲ or ▼.

Repeat steps 3 and 4 until you obtain the desired equalizer curve.

5 Press OFF.
The display returns to the previous indication and you can continue to listen to the adjusted sound.

Note
If you choose another menu (other than "EFFECT OFF"), the adjusted sound effect is lost. To retain the adjusted sound effect for future use, store it in a Personal File. (See page 46.)



Adjusting the Sound Effects

Adjusting the Level of the Surround Effect

This function allows you to adjust the surround effect by selecting one of four surround levels (LOW, MID, HIGH and OFF). You can get the surround effect without connecting surround speakers.
This operation is possible only with the remote commander.

1 **Select a preset equalizer setting that becomes the basis for the new effect.** **(See page 43.)**
(To make adjustment without using any sound effect, press EFFECT to display "EFFECT OFF".)

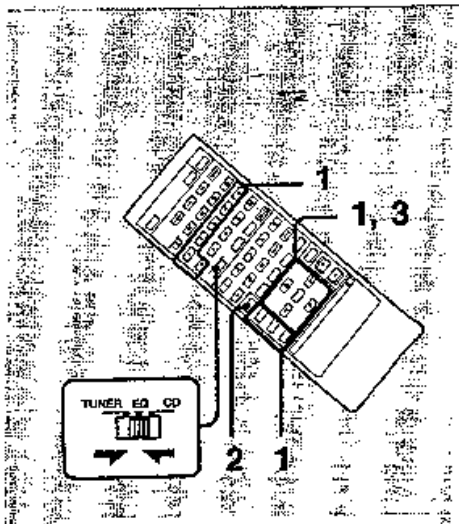
2 **Press SURROUND to display the surround effect level.**

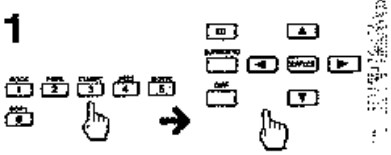
3 **Press CURSOR CONTROL ▲ or ▼ to adjust the level.**

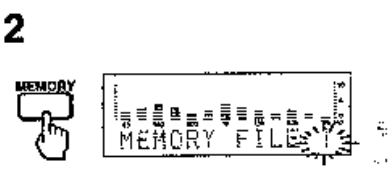
4 **Press OFF.**
The display returns to the previous indication and you can continue to listen to the adjusted sound.

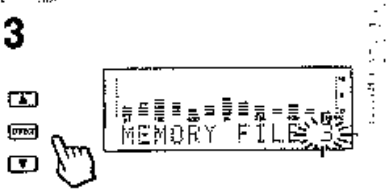
Note
If you choose another menu (other than "EFFECT OFF"), the adjusted sound effect is lost. To retain the adjusted sound effect for future use, store it in a Personal File. (See page 46.)

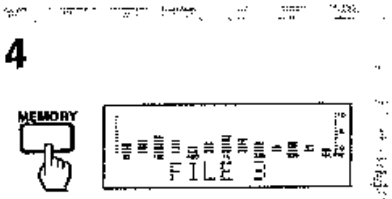
Adjusting the Sound Effects











Storing Your Individual Sound Effect Settings — Personal File

You can use a Personal File to store your individual settings which you adjusted using the graphic equalizer or surround effect. You can easily call up the settings at any time, and can store up to 5 settings.
This operation is possible only with the remote commander.

1 Select a preset equalizer setting and adjust the sound. (See pages 43 to 45.)

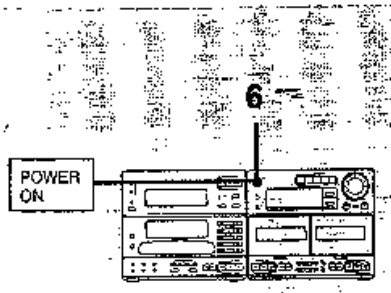
2 Press MEMORY.
"MEMORY FILE" appears and a file number (1 — 5) flashes.

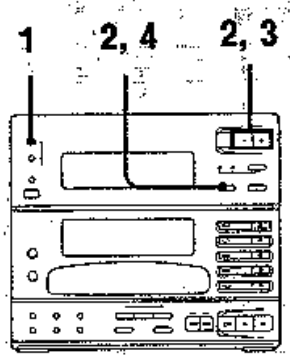
3 Press CURSOR CONTROL ▲ or ▼ to select a file number (FILE 1 — FILE 5).

4 Press MEMORY.
"FILE (number)" appears.
The sound you adjusted is stored under the selected file number. The setting previously stored in this file is erased and replaced by the new setting.

Calling up a setting from the Personal File
Press P. FILE repeatedly until the desired Personal File number appears on the display.

Timer-activated Operation



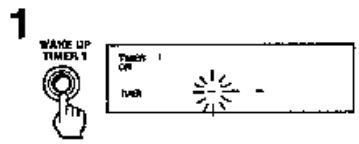


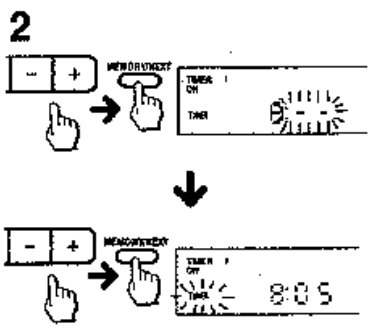
Setting the Wake-up Timer

The power can be turned on automatically at a preset time so that you can wake up to music (Wake-up Timer). One hour later, the power turns off automatically.
In addition, you can use the Sony MD recorder (MDS-101, not supplied) or DAT deck with the AU BUS as the program source. Be sure to connect the equipment to the AU BUS jack.
The preset timer-on time remains until you reset it or you disconnect the power cord.
You can preset up to two sets of Wake-up Timer.
This operation is not possible with the remote commander.

Before setting the timer
Make sure the clock is set correctly.
(See page 9.)

Example: Setting Wake-up Timer 1 at 8:05
(When setting Wake-up Timer 2, press WAKE UP TIMER 2 instead.)



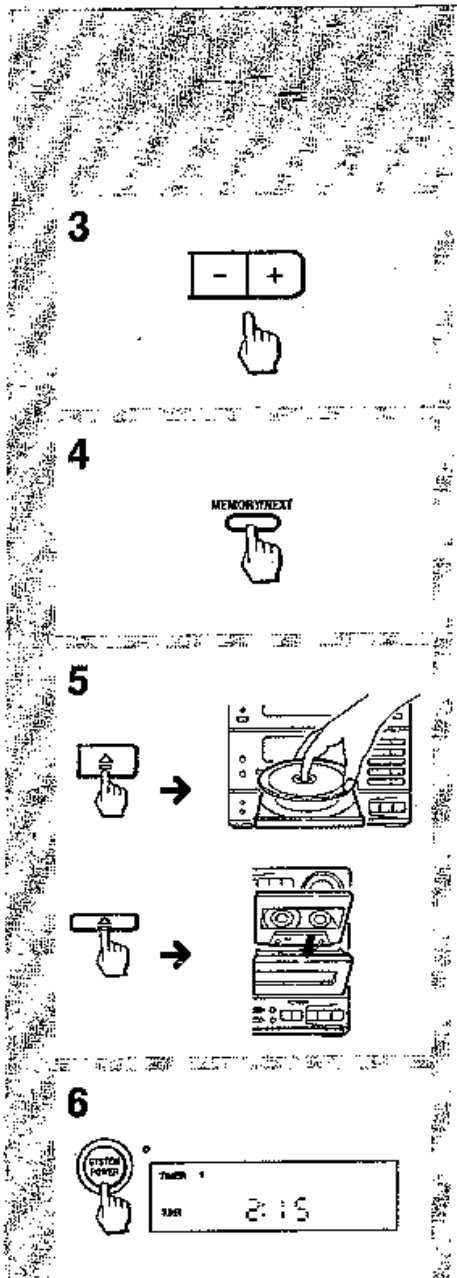


1 Press WAKE UP TIMER 1 for more than 2 seconds.
"TIMER 1" appears and the hour digits flash on the display window.

2 Set the hour and minute of the timer-on time by pressing – or +, and MEMORY/NEXT.
The program source flashes.

(to be continued)

Timer-activated Operation



(continued)

3 Select the program source by pressing – or +.
As you press, the source changes as follows:

TUNER ↔ CD ↔ TAPE ↔ MD/DAT

To listen to the radio
1) Press MEMORY/NEXT. The frequency display appears.
2) Press BAND to choose the desired band.
3) Press – or + to tune in to the desired preset station.

To listen to a tape, a mini disc or a digital audio tape
Go to step 4.

To listen to a CD
1) Press MEMORY/NEXT. The selection number display appears.
2) Press – or + to choose the desired selection (only from track numbers 1 to 20).

4 Press MEMORY/NEXT.
The preset items appear sequentially.

5 Prepare the program source by inserting a disc or tape.
- For listening to the radio
  You do not have to tune in to the station.
- For listening to a tape
  Insert the tape in either deck A or B. (If you insert the tape in both decks, deck A is selected automatically.)
- For listening to a CD
  Insert the disc in the disc tray and press DISC SKIP to select the desired disc.
- For listening to a mini disc
  Insert the mini disc in the MD recorder.
- For listening to a digital audio tape
  Insert the digital audio tape in the DAT deck.

6 Press SYSTEM POWER to turn off the system.
At the timer-on time, the system turns on automatically.

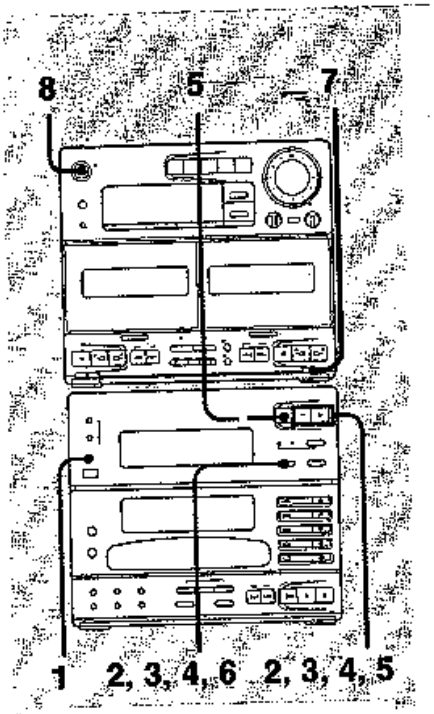
To change the time and program
1 Press WAKE UP TIMER 1 or 2 for more than 2 seconds to choose the timer you want to change.
2 Press MEMORY/NEXT until the item to be changed flashes.
3 Press – or + to change that item.
4 Press MEMORY/NEXT until the preset items appear sequentially.

When you do not want to use the timer program
Press WAKE UP TIMER 1 or 2 until "TIMER" disappears.
To activate the timer, press WAKE UP TIMER 1 or 2 again.

When the power is already on at the preset time
The program source automatically changes to the preset one, even if you are playing another program source.

Important

On the playing side of a tape during timer operation
Playback always starts from the front side. When you want to play back only one side, be sure that the side you want to play back is facing you when you insert it.



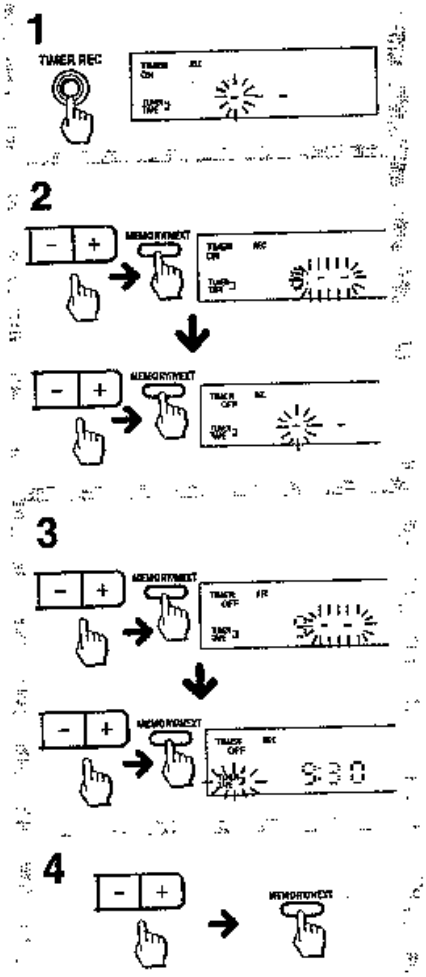
Timer-activated Operation

Setting the Recording Timer

The power can be turned on and off automatically so that you can record a radio broadcast while you are out.
In addition, you can use the Sony MD recorder (MDS-101, not supplied) or the DAT deck with AU BUS as a recording equipment. Be sure to connect the equipment to the AU BUS jack.
The recording timer works only once for each setting.
This operation is not possible with the remote commander.

Before setting the timer

- Make sure the clock is set correctly. (See page 9.)
- Be sure to insert a cassette tape, mini disc or a DAT that is long enough to record the radio program.



1 Press TIMER REC for more than 2 seconds.
"TIMER REC" and "ON" appear and the hour digits flash on the display.

2 Set the hour and minute of the timer-on time by pressing – or +, and MEMORY/NEXT.
"OFF" appears and the hour digits flash again.

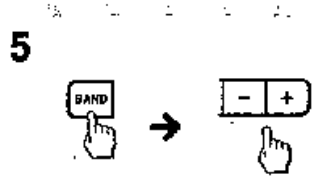
3 Set the hour and minute of the timer-off time by pressing – or +, and MEMORY/NEXT.
The recording equipment indication flashes.

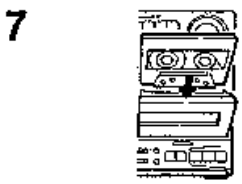
4 Select the recording equipment by pressing – or +, and MEMORY/NEXT.
The display changes as follows:

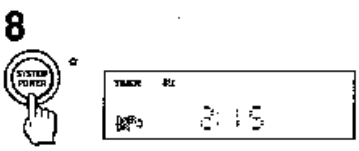
TUNER → TAPE → MD/DAT → TUNER

(to be continued)

Timer-activated Operation







(continued)

5 Press BAND and – or + to tune in to the desired preset station.

6 Press MEMORY/NEXT.
The preset items appear sequentially.

7 Prepare the recording equipment.

To record on a tape
1) Insert a tape into deck B.
2) If necessary, select the direction mode and Dolby NR.

To record on a mini disc
Insert a mini disc into MD recorder.

To record on a digital audio tape
1) Insert a digital audio tape into DAT deck.
2) Set the TIMER switch of the DAT deck to OFF.

8 Press SYSTEM POWER to turn off the system.

To change the time and program
1 Press TIMER REC for more than 2 seconds to choose the timer you want to change.
2 Press MEMORY/NEXT until the item to be changed flashes.
3 Press – or + to change that item.
4 Press MEMORY/NEXT until the preset items appear sequentially.

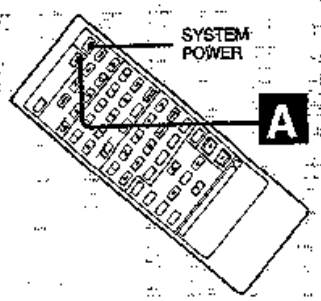
When you do not want to use the timer program
Press TIMER REC until "TIMER REC" disappears.

Note
WAKE UP TIMER 1, 2 and TIMER REC cannot be operated at the same time. If you select another timer after one has already been activated, the previous one will be canceled.

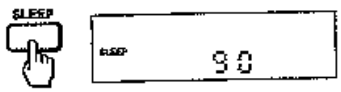
When the power is already on at the preset time
The program source automatically changes to the preset one, even if you are playing another program source. However, recording will not start even though the station is tuned in. Be sure to turn off the power before the preset time for timer recording.

Important
On the recording side of a tape during timer operation
Recording always starts from the front side. When you want to record on only one side, be sure that the side you want to record on is facing you when you insert it.

Timer-activated Operation



A



Setting the Sleep Timer A

By setting the sleep timer, the system power can be turned off after the preset duration (up to 90 minutes).
This operation is possible only with the remote commander.

Press SLEEP to select the desired duration in minutes.
As you press SLEEP, the display changes as follows:

90 → 80 → .... → 10 → –

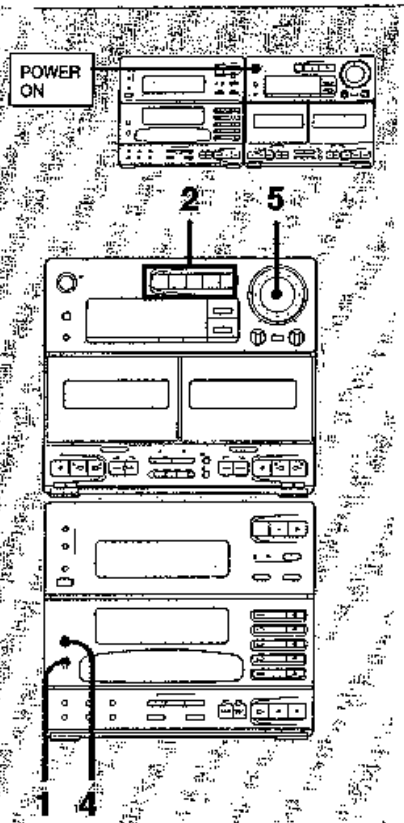
To turn off the system before it is turned off by the sleep timer
Press SYSTEM POWER.

To check the remaining time before the sleep timer turns off the system
Press SLEEP once, and the remaining time appears. The display returns to the previous indication automatically after several seconds.

Changing the preset duration while the sleep timer is in operation
Press SLEEP as many times as required to display the desired setting.

Turning off the sleep timer
Press SLEEP repeatedly until "SLEEP –" appears on the display.

Microphone Mixing



Mixing Operation

1 **Connect a microphone to the MIX MIC jack.**

2 **Select the program source with the function selector button and play it.**

3 **Sing or speak into the microphone.**

4 **Adjust the microphone volume level with the MIC LEVEL control.**

5 **Adjust the overall volume level with the VOLUME control.**

When the mixing is over
Be sure to disconnect the microphone.

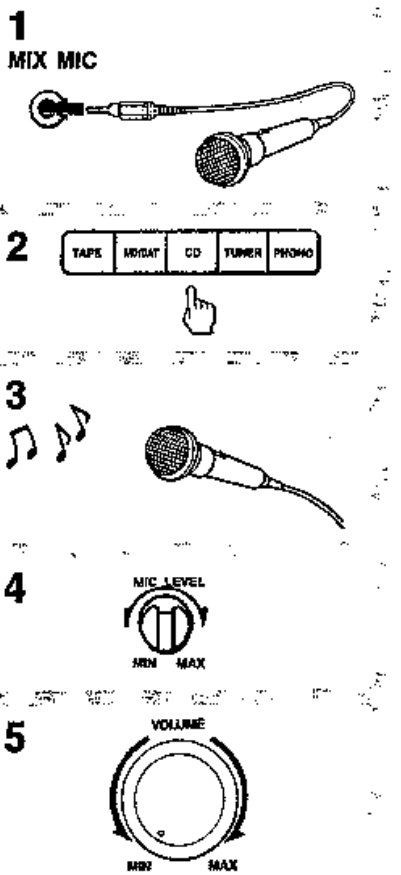
Recording the sound mixed with a source

1 Mix the sound as described above.
2 Insert a tape in deck B.
3 Set deck B to the recording mode.

Recording from a microphone only

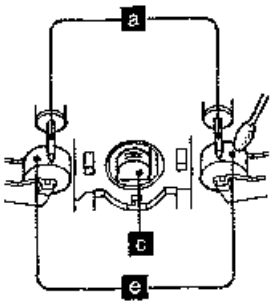
1 Press CD of the function selector button. If a CD is being played, press ■ to stop playing.
2 Start recording.

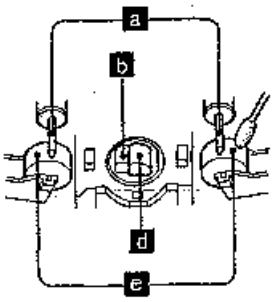
To stop howling (acoustic feedback)
Placing the microphone too close to the speakers may cause howling. Move the microphone away from the speakers or change the direction it faces.



Maintenance

A





Cleaning the Heads and the Tape Paths A

Clean after every 10 hours of operation and before recording for optimum record/playback quality.

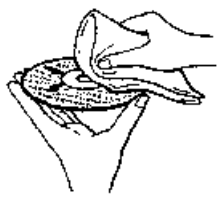
1 Press ⏏ to open the cassette holders.
2 Slightly moisten the tip of a cotton swab with cleaning fluid or alcohol.
3 Wipe the parts shown in the illustration:
   a Capstan
   b Erase head
   c Playback head
   d Record/playback head
   e Pinch roller

Do not insert a cassette until cleaned areas are completely dry.

Demagnetizing the Heads

After 20 to 30 hours of use, it is necessary to remove residual magnetism built up on the head using any commercially available demagnetizer.
For demagnetizing procedure, refer to the instruction manual of the demagnetizer.

B



Cleaning Discs B

When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center out.
Do not use solvents such as benzine, thinner, commercially available cleaners, or anti-static spray intended for analog discs.

Cleaning the Cabinet

Use a soft cloth slightly moistened with mild detergent solution.

Specifications

Tuner/CD Player (HCD-C70)

Tuner Section

System: FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range: 87.5 — 108 MHz
Antenna terminals: 75 ohms unbalanced
Intermediate frequency: 10.7 MHz

AM tuner section

Tuning range:
For Germany
AM: 531 — 1,602 kHz
For Italy
AM: 522 — 1,611 kHz
For other countries
MW: 531 — 1,602 kHz
LW: 153 — 279 kHz

Antenna: AM loop antenna, external antenna terminals

Intermediate frequency: 450 kHz

CD Player Section

System: Compact disc digital audio system
Laser: Semiconductor laser
Wavelength: 780 — 790 nm
Outputs: DIGITAL OPTICAL OUT (optical output connector)
wave length 660 nm,
output level –18 dBm

Amplifier/Cassette Deck (DXA-C70)

Amplifier Section

Continuous RMS power output
40 + 40 watts (6 ohms at 1 kHz, DIN)
45 + 45 watts (6 ohms at 1 kHz, 5% THD)

Music power output: 110 + 110 watts (6 ohms at 1 kHz, 10% THD)

Inputs:
MIX MIC (minijack):
sensitivity 1 mV,
impedance 47 kilohms
PHONO IN (phono jacks):
sensitivity 3 mV,
impedance 47 kilohms
MD/DAT IN (phono jacks):
sensitivity 250 mV,
impedance 47 kilohms

Outputs:
HEADPHONES (stereo minijack):
accepts headphones of 8 ohms or more
SPEAKER:
accepts speakers of 8 to 16 ohms
MD/DAT OUT (phono jacks):
voltage 250 mV,
impedance 1 kilohm

Cassette Deck Section

Recording system: 4-track 2-channel stereo

Frequency response (DOLBY NR OFF)
40 — 13,000 Hz (±3 dB),
using TYPE I cassette (Sony HF-S)
40 — 14,000 Hz (±3 dB),
using TYPE II cassette (Sony UX-S)
40 — 15,000 Hz (±3 dB),
using TYPE IV cassette (Sony METAL-S)

Wow and flutter: 0.1% WRMS ±0.3% (DIN)

General

Power requirements:
U.K. model:
240 V AC, 50 Hz
Model for other countries:
220 V — 230 V AC, 50/60 Hz

Power consumption: 135 watts

Dimensions: Approx. 225 × 390 × 310 mm (8⅞ × 15⅜ × 12¼ in.) (w/h/d). Incl. projecting parts and controls

Mass: Approx. 11.2 kg (24 lb 11 oz)

Supplied accessories:
Remote Commander (1)
Sony SUM-3 (NS) batteries (2)
AM loop antenna (1)
FM antenna (1)
AC power cord (1)
Flat cord (1)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Troubleshooting Guide

The following checks will assist in the correction of most problems which you may encounter with your system. Before going through the check list below, first check the following points.

- The power cord must be connected firmly.
- The speaker connection must also be firm.

Should any problem persist after you have made these checks, consult your nearest Sony dealer.

Radio Reception

Symptom	Cause (and Remedy)
The "TUNED" indicator flashes.	• Adjust the antenna.
The "STEREO" indicator flashes.	• Adjust the antenna.
Severe hum or noise occurs.	• Adjust the antenna. • The signal strength is too weak. Connect the external antenna. (See page 7.) • Connect a ground wire. • You may hear some noise when you press OPEN/CLOSE ⏏ of the CD player.
Stereo programs cannot be received in stereo.	• Press STEREO/MONO so that "STEREO" disappears. (See page 29.)

Cassette Deck Operation

Symptom	Cause (and Remedy)
Recording cannot be done.	• No cassette in the cassette holder. • The tab is removed from the cassette. (See page 34.) • The tape is wound completely.
Recording or playback cannot be done or there is a decrease in sound level.	• Dirty heads. (See page 53.) • Magnetic build-up on the record/playback heads. (See page 53.)
Excessive wow or flutter, or sound drop-out.	• Contamination of the capstans or pinch rollers. (See page 53.)
Insufficient erasure occurs.	• Magnetic build-up on the erase head. (See page 53.)
Increase of noise or erasure of high frequencies occurs.	• Magnetic build-up on the erase head. (See page 53.)

(to be continued)

Troubleshooting Guide

(continued)

CD Player Operation

Symptom	Cause (and Remedy)
The disc tray does not open.	• Turn off the power and disconnect the AC power cord. Remove the lock screws on the bottom of the system and connect the AC power cord again. (See page 4.)
The disc tray does not close.	• The disc is not placed correctly.
Play does not start.	• Dirty disc (See page 53.) • The disc is inserted upside down. • The player is in the pause mode. • Moisture condensation. (See page 5.)
"NO DISC" is displayed.	• There is no disc in the player.
Play does not start from the first selection.	• The player is in the PROGRAM or SHUFFLE mode. Press CONTINUE.
"OVER" is displayed.	• ▶▶▷▷I was continuously pressed at the end of the disc. Press I◁◁◀◀ to return to the normal indication.
"CD OFF" is displayed.	• Tuner is selected for the program source.

General

Symptom	Cause (and Remedy)
No sound.	• Turn VOLUME clockwise. • The headphones are connected. Disconnect them.
No sound from one channel or unbalanced left and right volume.	• Check the speaker connections of the inoperative channel.
Reversed left and right sound.	• Check the speaker cord connections and speaker location.
Lack of bass sound or apparently imprecise physical location of musical instruments.	• Check the speaker connections for proper phasing.
Severe hum or noise.	• A TV or VCR is too close to the stereo system. Separate the stereo system from the TV or VCR.
The speakers are short-circuited.	• Leave the speakers alone for about 15 minutes, after which they should operate normally.

Sony Corporation Printed in Japan